

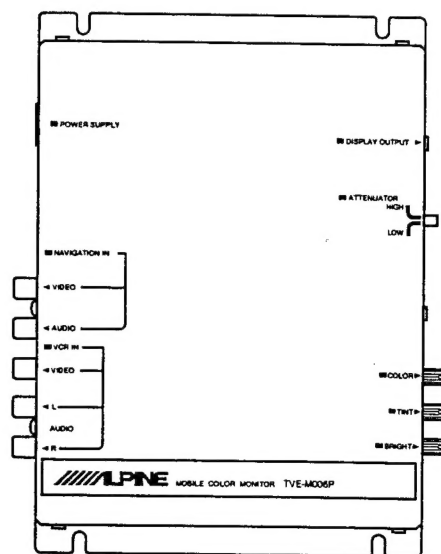
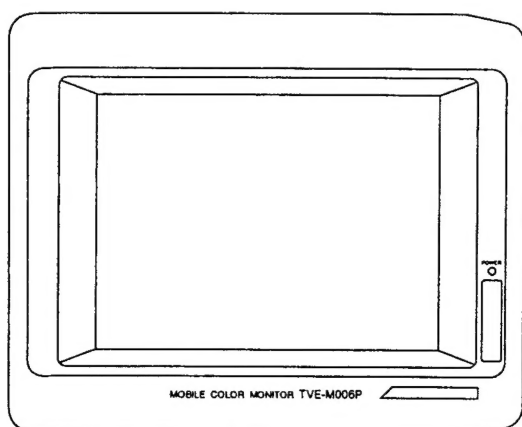
# **///ALPINE** **SERVICE MANUAL**

---

## **5.6-inch Mobile Color Monitor Unit**

---

● This model is component system unit of AV Interface Unit and Monitor Unit.



---

# **TVE-M006P**

## **Contents**

Packing Assembly Parts List  
Packing Method View

### **● AV Interface Unit**

Specifications  
Adjustment Procedures  
Parts Layout on P.C.Board and Wiring Diagram  
Schematic Diagram  
Terminal Voltage of IC/TR  
Electrical Parts List  
Exploded View (Cabinet)  
Cabinet Assembly Parts List

### **● Monitor Unit**

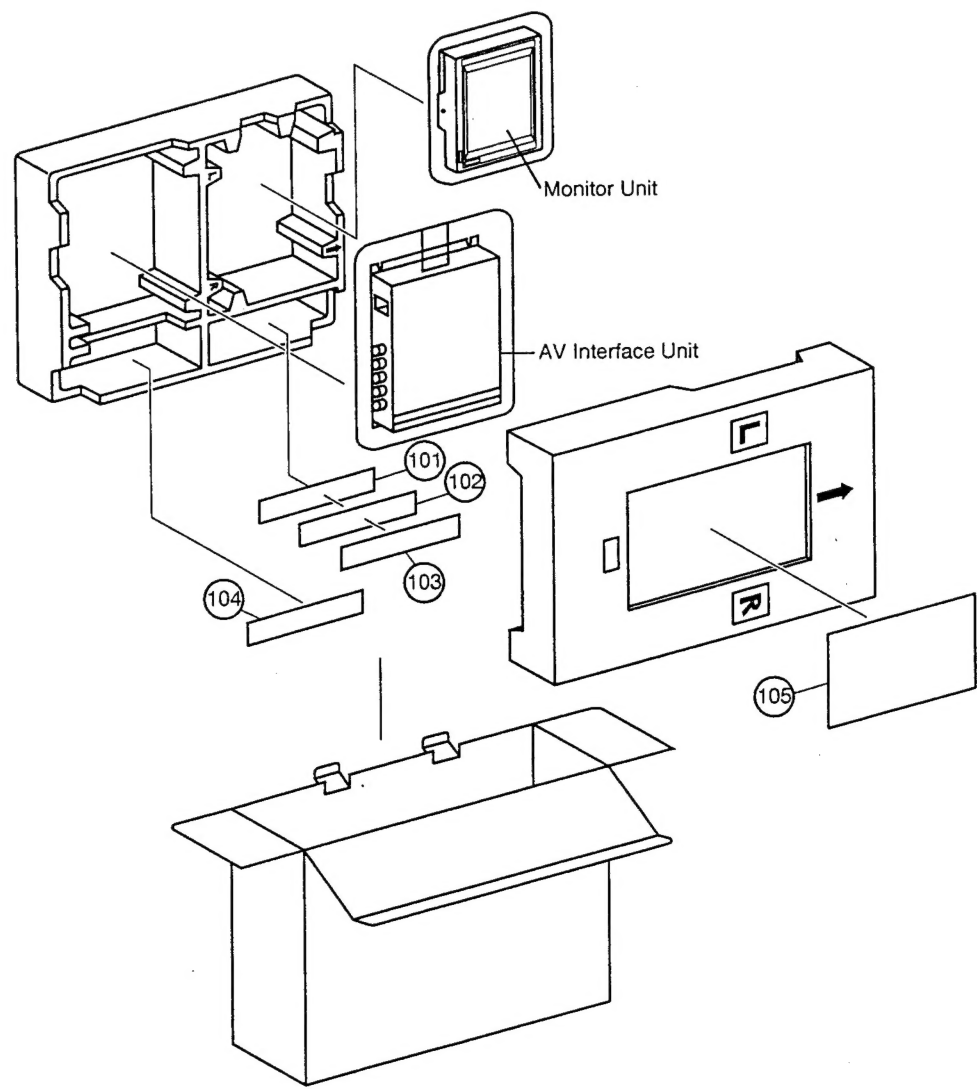
Specifications  
Adjustment Procedures  
Parts Layout on P.C.Boards and Wiring Diagram  
Schematic Diagram  
Terminal Voltage of IC/TR  
Electrical Parts List  
Exploded View (Cabinet)  
Cabinet Assembly Parts List

NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

Packing Assembly Parts List

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
101	01T85426W02	Assy., Cable			
102	01T25930W08	Assy., Power Wire			
103-1	03S40018G07	Screw, Tapping (M4X14)			
103-2	75T58346F01	Pad, Magic Tape			
104	01T85360W01	Stand, ETST6			
105	68P81384W33	Owner's Manual			

Packing Method View



# AV Interface Unit

## Contents

Specifications
Adjustment Procedures
Parts Layout on P.C.Board and Wiring Diagram
Schematic Diagram
Terminal Voltage of IC/TR
Electrical Parts List
Exploded View (Cabinet)
Cabinet Assembly Parts List

## Specifications

Output .....	VIDEO : 1Vp-p
	AUDIO : 500mV
Input .....	VIDEO : 1Vp-P
	AUDIO : 500mV
FSC .....	PAL : 4.433618MHz $\pm$ 300Hz
	NTSC : 3.579545MHz $\pm$ 300Hz
Audio Attenuator .....	HIGH : $\pm$ 0dB
	LOW : -6dB
Power Supply .....	DC14.4V (11~16V allowable)
Semiconductors .....	8 IC's, 23 Transistors, 5 Diodes, 1 Zener Diodes
Dimensions (W $\times$ H $\times$ D) .....	145 $\times$ 29 $\times$ 182mm
Weight .....	540g

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.



## Adjustment Procedures

### 1) Preparation for adjustments

- ① Connect the AV interface unit to the Monitor unit.
- ② Connect the DC voltage regulator power supply of  $14.4 \pm 0.1V$  to the power supply connector (ET801).
- ③ Set each switch / Volume of the AV interface unit to the following position.
  - ATTENUATOR Level switch (S201) ..... [HIGH]
  - Volume, COLOR (VR906) / TINT (VR907) / BRIGHT (VR908) ..... [Center Position]Set each switch of the Monitor unit to the following position.
  - Main POWER Switch (S500) ..... [STAND BY]
  - DIMMER Switch (S501) ..... [HIGH]

### 2) Adjustment procedures

- ① Connect the DC voltmeter between T.P.1 and GND. Adjust VR901 unit the voltage level between T.P.s above becomes  $0.95 \pm 0.1V$ .
- ② Connect the DC voltmeter between T.P.2 and GND. Adjust VR902 unit the voltage level between T.P.s above becomes  $1.38 \pm 0.1V$ .
- ③ Connect the DC voltmeter between T.P.3 and GND. Adjust VR903 unit the voltage level between T.P.s above becomes  $0.5 \pm 0.1V$ .
- ④ Connect the DC voltmeter between T.P.4 and GND. Adjust VR904 unit the voltage level between T.P.s above becomes  $2.5 \pm 0.1V$ .
- ⑤ Connect the DC voltmeter between T.P.5 and GND. Adjust VR905 unit the voltage level between T.P.s above becomes  $3.5 \pm 0.1V$ .

## Terminal Voltage of IC/TR

IC201      IC803      IC902      IC903, 904

8	8V	1	5V	35	5V	7	8V
		3	10.5V				

	E	C	B
Q801	14.2V	14.1V	—
Q803	13.4V	13.3V	—
Q805	13.4V	—	—
Q806	14V	PS	—
Q807	8.1V	13.3V	—

NOTE : For the terminal voltage not mentiond, the voltage indication is omitted for the voltage varies depend on the operation mode.

### [Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : Monitor Unit Connection

TVE-M006P

# Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor :  $\mu$ F=microfarads,pF=picofarads

Abbreviations		
RES.= Resistor	CAP.= Capacitor	
C.F.= Carbon Film	ELY.= Electrolytic	
M.F.= Metal Film	CER.= Ceramic	
M.O.= Metal Oxide Film	MYL.= Mylar	
M.P.= Metal Plate	TAN.= Tantalum	
TR. = Transistor	POLY.= Polystyrol	
TRANS.= Transformer	PP. = Polypropylene	
CP. = Chip	PLT.= Polyethylene	
	PF. = Polyester Film	

Symbol No.	Part No.	Description
BOX P.C.Board		
IC's		
IC201	51T93338F01	NJM4560E
IC202	51T45178W02	TC4W53F
IC801	51T75523W01	TL5001
IC803	51T65483W02	PQ05SZ51
IC901	51T65249W01	NJM2235M
IC902	51T85451W01	TA8795BF
IC903	51T85419W01	NJM2267M
IC904	51T85419W01	NJM2267M
Transistors		
Q201	48T63417F01	CP., 2SC2412K
Q401	48T62967F04	CP., DTC144K
Q402	48T62967F21	CP., DTC124TK
Q403	48T62967F21	CP., DTC124TK
Q404	48T63417F01	CP., 2SC2412K
Q405	48T62967F23	CP., DTC143TK
Q407	48T63417F01	CP., 2SC2412K
Q408	48T62967F23	CP., DTC143TK
Q801	48T15511W02	CP., 2SB1261
Q802	48T62967F23	CP., DTC143TK
Q803	48T15511W02	CP., 2SB1261
Q804	48T62967F23	CP., DTC143TK
Q805	48T62966F02	CP., DTA114
Q806	48T85527W01	CP., 2SB952A
Q807	48T73023F01	CP., 2SD874A
Q901	48T63417F01	CP., 2SC2412K
Q902	48T63420F01	CP., 2SA1037K
Q903	48T63417F01	CP., 2SC2412K
Q904	48T63417F01	CP., 2SC2412K
Q905	48T63417F01	CP., 2SC2412K
Q906	48T63417F01	CP., 2SC2412K
Q907	48T62967F09	CP., DTC114TK
Q908	48T62967F09	CP., DTC114TK

Symbol No.	Part No.	Description
Diodes		
D401	48T15512W01	CP., DSM10
D402	48T15702W01	CP., SB05-05CP
D403	48T15702W01	CP., SB05-05CP
D802	48T15512W01	CP., DSM10
D803	48T75066W01	CP., F2J4S
ZD802	48T62934F35	Zener, CP. RD8.2MB3
Coils		
L801	25C40894G10	Choke Filter
L804	24T75266W09	Inductor, 47μH
L902	24T75195W48	Inductor, CP. 68μH
L903	24T75195W48	Inductor, CP. 68μH
L904	24T75195W44	Inductor, CP. 33μH
Crystal		
X901	91T94641F02	3.579545MHz
X902	91T94641F22	4.433619MHz
X903	91T85054W02	CER. Lock, CP. CSBF503JF560 (512KHz)
Filters		
Z801	91T55325W08	CP., NFM61RH20T332
Z901	91T85504W01	CP., FST (2.3MHz)
Surge Absorber		
ZNR801	48T85018W01	6KA24L
Capacitors		
C201	08S65128F10	CP., 8pF
E201	23T75478W15	ELY., 10μF / 16V
C202	08S65128F27	CP., 47pF
E202	23T75478W15	ELY., 10μF / 16V
C203	08S65128F27	CP., 47pF
E203	23T75478W15	ELY., 10μF / 16V
C204	08S65128F10	CP., 8pF
E204	23T75478W15	ELY., 10μF / 16V
C205	08S65128F76	CP., 0.1μF

## TVE-M006P

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
E205	23T75478W15	ELY., 10 $\mu$ F / 16V	C912	08S82122F13	CP., 10pF
C206	08S65128F76	CP., 0.1 $\mu$ F	E912	23T75478W15	ELY., 10 $\mu$ F / 16V
E206	23T75478W19	ELY., 100 $\mu$ F / 16V	C913	08S65128F72	CP., 0.022 $\mu$ F
E207	23T75478W16	ELY., 22 $\mu$ F / 16V	E913	23T75478W37	ELY., 1 $\mu$ F / 50V
E208	23T75478W15	ELY., 10 $\mu$ F / 16V	C914	08S82122F16	CP., 13pF
E209	23T75478W33	ELY., 0.1 $\mu$ F / 50V	E914	23T75478W15	ELY., 10 $\mu$ F / 16V
E210	23T75478W16	ELY., 22 $\mu$ F / 16V	C915	08S65128F69	CP., 0.01 $\mu$ F
E401	23T75478W37	ELY., 1 $\mu$ F / 50V	E915	23T75478W37	ELY., 1 $\mu$ F / 50V
E402	23T75478W37	ELY., 1 $\mu$ F / 50V	C916	08S65128F72	CP., 0.022 $\mu$ F
C801	08S65128F76	CP., 0.1 $\mu$ F	E916	23T75478W38	ELY., 2.2 $\mu$ F / 50V
E801	23T75479W63	ELY., 2200 $\mu$ F / 16V	C917	08S65128F12	CP., 10pF
E802	23T75478W15	ELY., 10 $\mu$ F / 16V	C918	08S65128F17	CP., 18pF
C803	08S65128F76	CP., 0.1 $\mu$ F	E918	23T75478W15	ELY., 10 $\mu$ F / 16V
E803	23T75478W15	ELY., 10 $\mu$ F / 16V	C919	08S65128F69	CP., 0.01 $\mu$ F
C804	08S65128F76	CP., 0.1 $\mu$ F	C920	08S65128F76	CP., 0.1 $\mu$ F
C807	08S65128F76	CP., 0.1 $\mu$ F	E920	23T75478W15	ELY., 10 $\mu$ F / 16V
E807	23T75479W27	ELY., 470 $\mu$ F / 16V	C921	08S65128F69	CP., 0.01 $\mu$ F
C808	08S65128F76	CP., 0.1 $\mu$ F	E921	23T75478W19	ELY., 100 $\mu$ F / 16V
E808	23T75479W63	ELY., 2200 $\mu$ F / 16V	C922	08S65128F69	CP., 0.01 $\mu$ F
C809	08S65128F76	CP., 0.1 $\mu$ F	E922	23T75478W40	ELY., 4.7 $\mu$ F / 50V
E809	23T75479W63	ELY., 2200 $\mu$ F / 16V	C923	08S65128F69	CP., 0.01 $\mu$ F
E811	23T75478W15	ELY., 10 $\mu$ F / 16V	E923	23T75478W16	ELY., 22 $\mu$ F / 16V
E812	23T75478W18	ELY., 47 $\mu$ F / 16V	C924	08S65128F69	CP., 0.01 $\mu$ F
C813	08S65128F76	CP., 0.1 $\mu$ F	E924	23T75478W19	ELY., 100 $\mu$ F / 16V
E813	23T75478W15	ELY., 10 $\mu$ F / 16V	C925	08S65128F76	CP., 0.1 $\mu$ F
E814	23S55311W51	CP., TAN. 1 $\mu$ F / 25V	E925	23T75478W40	ELY., 4.7 $\mu$ F / 50V
E815	23T75479W27	ELY., 470 $\mu$ F / 16V	C926	08S65128F76	CP., 0.1 $\mu$ F
C901	08S65128F76	CP., 0.1 $\mu$ F	E926	23T75478W16	ELY., 22 $\mu$ F / 16V
E901	23T75478W20	ELY., 220 $\mu$ F / 16V	E927	23T75478W19	ELY., 100 $\mu$ F / 16V
C902	08S65128F21	CP., 27pF	E928	23T75478W19	ELY., 100 $\mu$ F / 16V
E902	23T75478W20	ELY., 220 $\mu$ F / 16V	E929	23T75478W40	ELY., 4.7 $\mu$ F / 50V
C903	08S65128F69	CP., 0.01 $\mu$ F	E930	23T75478W16	ELY., 22 $\mu$ F / 16V
E903	23T75478W16	ELY., 22 $\mu$ F / 16V	E931	23T75478W19	ELY., 100 $\mu$ F / 16V
C904	08S65128F69	CP., 0.01 $\mu$ F	E932	23T75478W40	ELY., 4.7 $\mu$ F / 50V
E904	23T75478W16	ELY., 22 $\mu$ F / 16V	E933	23T75478W16	ELY., 22 $\mu$ F / 16V
C905	08S65128F69	CP., 0.01 $\mu$ F	E934	23T75478W19	ELY., 100 $\mu$ F / 16V
E905	23T75478W19	ELY., 100 $\mu$ F / 16V	E935	23T75478W15	ELY., 10 $\mu$ F / 16V
C906	08S65128F69	CP., 0.01 $\mu$ F	C997	23S82372F18	ELY., (B.P) 1 $\mu$ F / 50V
E906	23T75478W15	ELY., 10 $\mu$ F / 16V	C999	23S82372F18	ELY., (B.P) 1 $\mu$ F / 50V
C907	08S65128F69	CP., 0.01 $\mu$ F			
E907	23T75478W15	ELY., 10 $\mu$ F / 16V			
C908	08S65128F28	CP., 51pF			
E908	23T75478W15	ELY., 10 $\mu$ F / 16V			
C909	08S65128F20	CP., 24pF			
E909	23T75478W37	ELY., 1 $\mu$ F / 50V			
C910	08S65128F72	CP., 0.022 $\mu$ F			
E910	23T75478W37	ELY., 1 $\mu$ F / 50V			
C911	08S65128F69	CP., 0.01 $\mu$ F			
E911	23T75478W15	ELY., 10 $\mu$ F / 16V			

Resistors		
R201	06S64995F84	20K ohm
R202	06S64995F84	20K ohm
R203	06S64995F84	20K ohm
R204	06S64995F77	10K ohm
R205	06S64995F77	10K ohm
R206	06S64995F84	20K ohm

(All resistors are chip 1/10W $\pm$ 5% unless otherwise noted.)

# TVE-M006P

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R207	06S64995F84	20K ohm	R827	06S70072F32	130 ohm 1/4W
R208	06S64995F84	20K ohm	R903	06S64995F26	75 ohm
R209	06S64995F84	20K ohm	R904	06S64995F26	75 ohm
R210	06S64995F77	10K ohm	R905	06S64995F29	100 ohm
R211	06S64995F77	10K ohm	R907	06S64995F84	20K ohm
R213	06S64996F02	100K ohm	R908	06S64995F84	20K ohm
R214	06S64995F53	1K ohm	R909	06S64995F53	1K ohm
R215	06S64995F53	1K ohm	R910	06S64995F53	1K ohm
R216	06S64995F89	33K ohm	R911	06S64995F41	330 ohm
R217	06S64995F93	47K ohm	R912	06S64995F53	1K ohm
R218	06S64995F45	470 ohm	R913	06S64995F47	560 ohm
R219	06S64995F53	1K ohm	R914	06S64995F47	560 ohm
R401	06S64995F69	4.7K ohm	R915	06S64995F53	1K ohm
R402	06S64995F93	47K ohm	R916	06S64995F77	10K ohm
R403	06S64995F77	10K ohm	R917	06S64995F77	10K ohm
R404	06S64995F69	4.7K ohm	R918	06S64995F77	10K ohm
R405	06S64995F53	1K ohm	R919	06S64995F77	10K ohm
R406	06S64995F84	20K ohm	R921	06S64995F97	68K ohm
R407	06S64995F53	1K ohm	R922	06S64995F76	9.1K ohm
R408	06S64995F61	2.2K ohm	R923	06S64995F92	43K ohm
R409	06S64996F02	100K ohm	R924	06S64995F77	10K ohm
R410	06S64995F84	20K ohm	R925	06S64995F97	68K ohm
R411	06S64995F93	47K ohm	R926	06S64995F64	3K ohm
R412	06S64995F81	15K ohm	R927	06S64995F53	1K ohm
R413	06S64995F93	47K ohm	R928	06S64995F91	39K ohm
R414	06S64995F84	20K ohm	R929	06S64995F91	39K ohm
R415	06S64995F81	15K ohm	R930	06S64995F91	39K ohm
R801	06S64995F77	10K ohm	R931	06S64995F93	47K ohm
R802	06S70072F63	2.7K ohm 1/4W	R932	06S64995F55	1.2K ohm
R803	06S70072F63	2.7K ohm 1/4W	R933	06S64996F05	130K ohm
R804	06S64995F79	12K ohm	R934	06S64995F77	10K ohm
R805	06S64995F77	10K ohm	R935	06S64995F77	10K ohm
R806	06S70072F63	2.7K ohm 1/4W	R936	06S64995F77	10K ohm
R807	06S70072F63	2.7K ohm 1/4W	R937	06S64995F77	10K ohm
R808	06S64995F79	12K ohm	R938	06S64995F77	10K ohm
R809	06S70072F53	1K ohm 1/4W	R939	06S64996F35	5.6M ohm
R810	06S70072F53	1K ohm 1/4W	R940	06S64995F43	390 ohm
R811	06S64995F61	2.2K ohm	R941	06S64995F61	2.2K ohm
R812	06S64996F10	220K ohm	R942	06S64995F70	5.1K ohm
R813	06S64995F71	5.6K ohm	R943	06S64995F77	10K ohm
R814	06S64995F98	75K ohm	R944	06S64996F35	5.6M ohm
R815	06S64995F96	62K ohm	R945	06S64995F53	1K ohm
R816	06S64995F88	30K ohm	R946	06S64996F35	5.6M ohm
R817	06S64995F70	5.1K ohm	R947	06S64995F51	820 ohm
R818	06S70072F49	680 ohm 1/4W	R948	06S64995F84	20K ohm
R820	06S70072F32	130 ohm 1/4W	R949	06S64995F84	20K ohm
R821	06S70072F32	130 ohm 1/4W	R950	06S64995F77	10K ohm
R822	06S70072F32	130 ohm 1/4W	R951	06S64995F53	1K ohm
R826	06S64995F05	10 ohm	R953	06S64995F75	8.2K ohm

## TVE-M006P

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R958	06S64995F85	22K ohm			
R959	06S64995F85	22K ohm			
R960	06S64995F53	1K ohm			
R961	06S64995F84	20K ohm			
R962	06S64995F55	1.2K ohm			
R963	06S64995F88	30K ohm			
R964	06S64995F64	3K ohm			
R965	06S64995F77	10K ohm			
R966	06S64995F84	20K ohm			
R967	06S64995F85	22K ohm			
R968	06S64995F53	1K ohm			
VR901	18T45357W13	Variable, CP. 10K ohm			
VR902	18T45357W13	Variable, CP. 10K ohm			
VR903	18T45357W13	Variable, CP. 10K ohm			
VR904	18T45357W13	Variable, CP. 10K ohm			
VR905	18T45357W13	Variable, CP. 10K ohm			
Miscellaneous					
ET801	09T25842W08	Power Supply Connector			
ET901	09T85443W01	16P Connector (To Monitor Unit)			
JK201	09T75320W01	RCA Jack, NAVIGATION IN			
JK202	09T75321W01	RCA Jack, VCR IN			
S201	40T94668F03	Slide Switch, SSSF1214 (ATTENUATOR HIGH/LOW)			
VR906	18T55389W06	Rotary Volume, 50K ohm (COLOR)			
VR907	18T55389W06	Rotary Volume, 50K ohm (TINT)			
VR908	18T55389W06	Rotary Volume, 50K ohm (BRIGHT)			

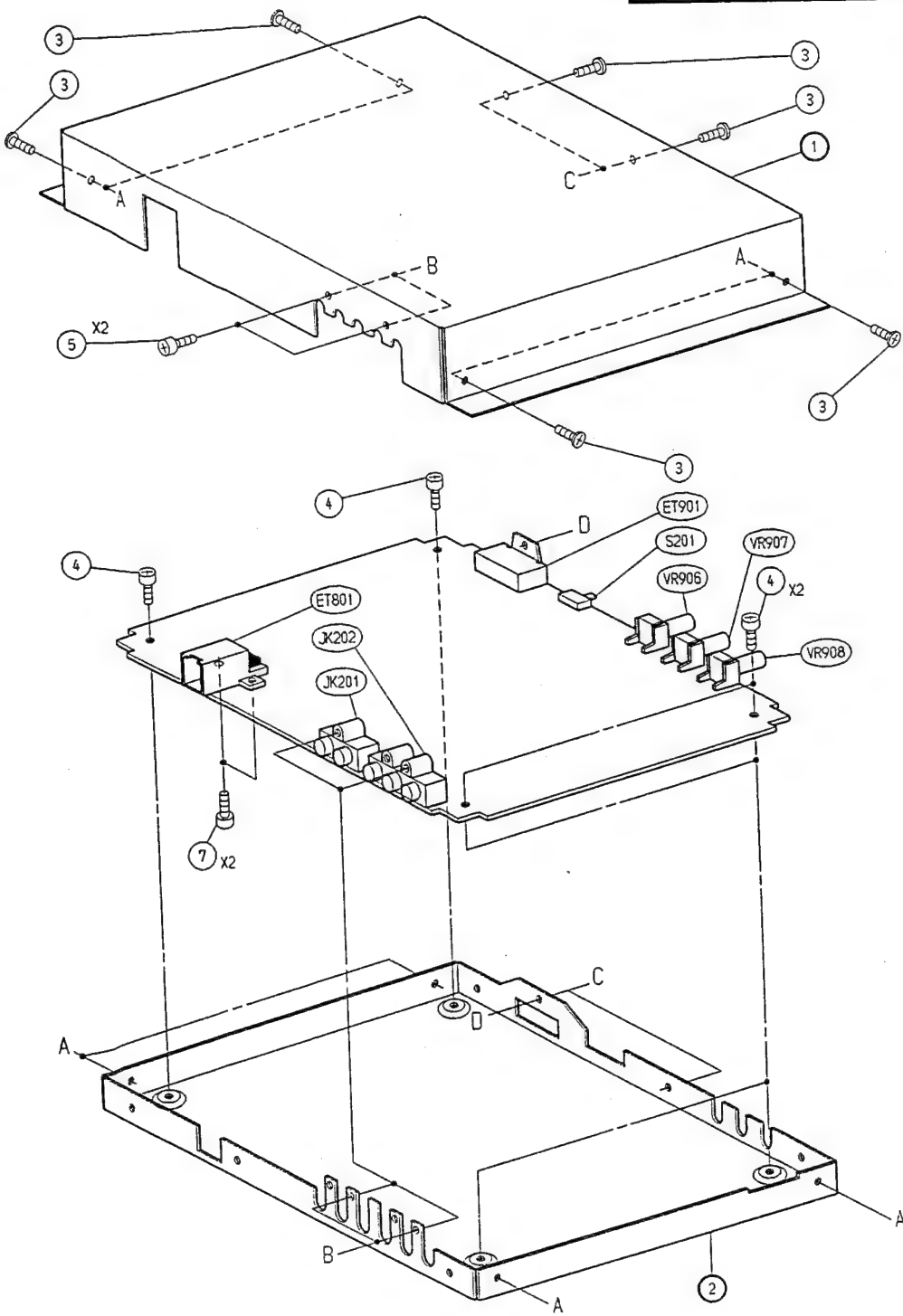
TVE-M006P

Exploded View (Cabinet)

Cabinet Assembly Parts List

NOTE: No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description
3		03S38013W33	Screw, Flat (M2.6X5)
4		03S44205G48	Screw, Pan (M2.6X5)
5		03S68555F42	Screw, Pan (M3X6)
7		03S63857F51	Screw, Tapping (M3X10)



# Monitor Unit

## Contents

Specifications
Adjustment Procedures
Parts Layout on P.C.Boards and Wiring Diagram
Schematic Diagram
Terminal Voltage of IC/TR
Electrical Parts List
Exploded View (Cabinet)
Cabinet Assembly Parts List

## Specifications

Screen Size	6-type
Display System	Low reflection rear projection type TN liquid crystal panel
Drive System	Active matrix drive, normally white display
Number of Picture Elements	228, 480 pcs. NTSC (H : 960×V : 238 dots) 230, 400 pcs. PAL (H : 960×V : 240 dots)
Light Source	Internal optical system (U-type cold cathode fluorescent tube)
Semiconductors	9 IC's, 17 Transistors, 3 Diodes, 4 Zener Diodes
Dimensions (W×H×D)	171×127×33mm
Weight	510g

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.



## Adjustment Procedures

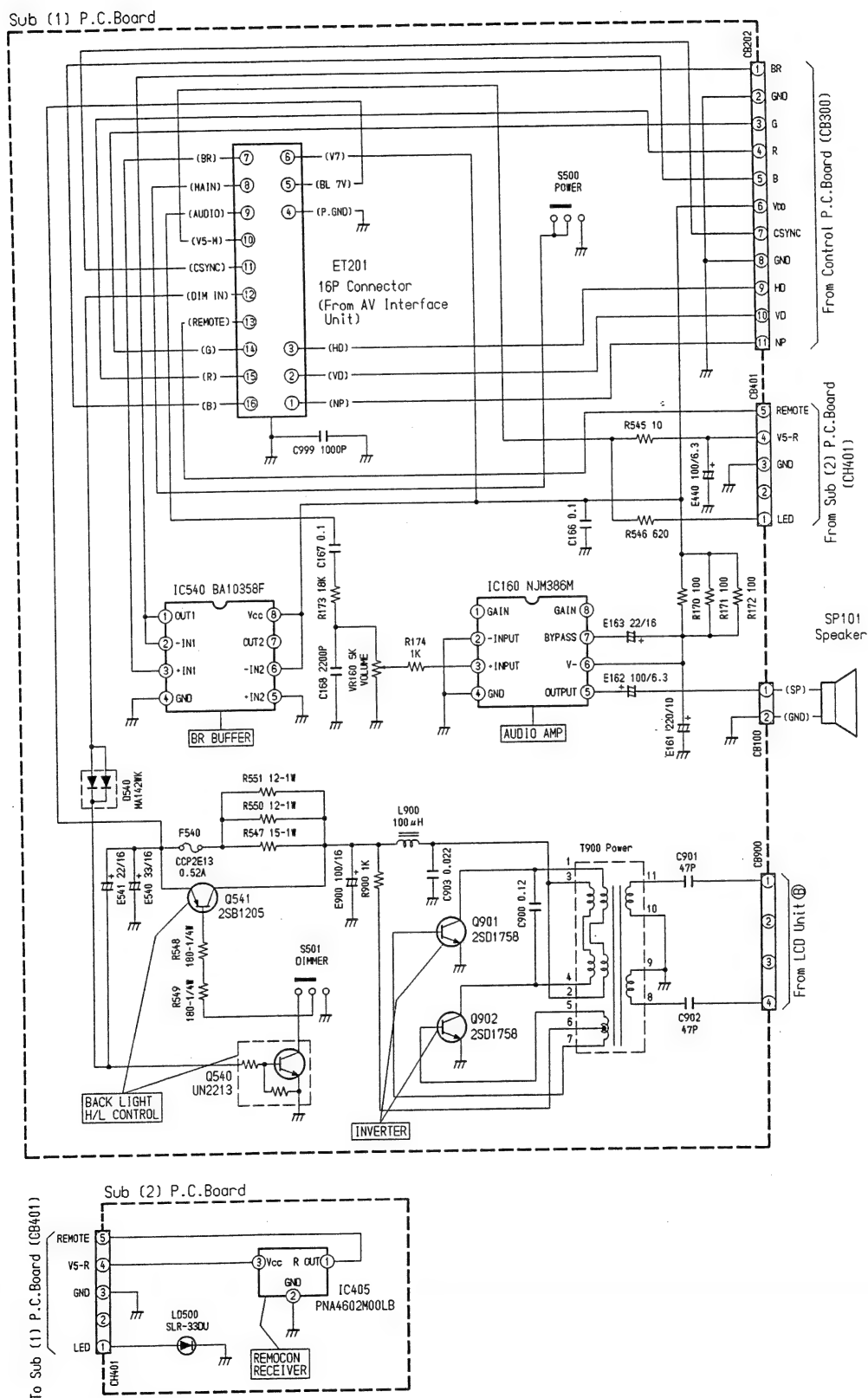
### 1) Preparation for adjustments

- ① Connect the AV interface unit to the Monitor unit .
- ② Connect the DC voltage regulator power supply of  $14.4 \pm 0.1\text{V}$  to the power supply connector (ET801).
- ③ Set each switch of the AV interface unit to the following position.
  - ATTENUATOR switch (S201) ..... [LOW]
  - Volume, COLOR (VR906) / TINT (VR907) / BRIGHT (VR908) ..... [Center Position]Set each switch of the Monitor unit to the following position.
  - Main POWER Switch (S500) ..... [STAND BY]
  - DIMMER Switch (S501) ..... [HIGH]
- ④ Supply the composite video signal (color bar signal including 100% white) to the VIDEO input terminal (JK202-1) on the AV interface Unit.

### 2) Free-run frequency adjustment (VR600) - Screen centering adjustment.

- ① Connect the DC voltmeter (full-scale more than 5V, resolution 10mV) between TP600 (PLL Adjust) and TP311 (GND).
- ② Adjust VR600 until the voltage between TPs above becomes  $2.1 \pm 0.1\text{V}$ .

## Schematic Diagram (2/2)



# TVE-M006P

## Terminal Voltage of IC/TR

IC160

1	1.15V	Vol Min
2	0V	
3	0V	
4	0V	
5	3.12V	Vol Min
6	6.46V	Vol Min
7	3.19V	Vol Min
8	1.15V	Vol Min

IC300

1	0V	13	waveform19
2	waveform14	14	waveform20
3	0V	15	waveform21
4	1.58V	16	waveform22
5	0V	17	waveform23
6	waveform15	18	waveform24
7	3.92V	19	0V
8	0V	20	waveform25
9	waveform16	21	4.92V
10	waveform17	22	0V
11	waveform18	23	4.87V
12	0V	24	0V

IC301

1	4.92V
2	0V
3	7V

IC405

1	4.93V
2	0V
3	4.94V

IC500

1	2.7V
2	2.7V
3	2.69V
4	-5.52V
5	2.01V
6	2.01V
7	0.776V
8	6.83V

IC540

1	4.76V	BR Min
2	4.72V	BR Min
3	4.75V	BR Min
4	0V	
5	0V	
6	7V	
7	0V	
8	7V	

IC600

1	NC	15	0V
2	waveform32	16	waveform44
3	waveform33	17	waveform45
4	waveform34	18	waveform46
5	waveform35	19	waveform47
6	waveform36	20	waveform48
7	waveform37	21	0V
8	waveform38	22	4.92V
9	waveform39	23	4.92V
10	0V	24	0V
11	waveform41	25	waveform40
12	waveform42	26	waveform49
13	waveform43	27	waveform50
14	0V	28	4.92V

IC501

1	6.74V
2	waveform1
3	-20.73V
4	-20.4V
5	-21.59V
6	6.83V
7	6.74V
8	6.74V

IC601

1	4.92V	24	waveform62	51	4.92V	73	waveform24
2	waveform79	25	0V	52	waveform48	74	waveform18
3	waveform51	26	4.92V	53	waveform47	75	0V
4	waveform80	27	waveform63	54	waveform39	76	4.92V
5	0V	28	waveform64	55	waveform38	77	waveform16
6	0V	29	waveform65	56	waveform37	78	waveform18
7	waveform52	30	0V	57	waveform36	79-81	5V
8	waveform53	31	waveform65	58	waveform35	82-84	4.96V
9	waveform54	32	waveform66	59	waveform34	85	waveform68
10	waveform55	33-36	4.95V	60	waveform33	86-88	0V
11	waveform56	37	4.9V	61	waveform32	89	4.92V
12	waveform81	38, 39	4.95V	62	waveform50	90	waveform69
13, 14	0V	40	0V	63	waveform49	91	waveform70
15	5V	41, 42	4.9V	64	4.92V	92	waveform71
16	0V	43	waveform40	65	waveform67	93	waveform72
17	waveform57	44	waveform41	66	waveform63	94	waveform73
18	0V	45	waveform42	67	waveform24	95	waveform74
19	waveform58	46	waveform43	68	waveform23	96	waveform75
20	waveform59	47	waveform44	69	waveform22	97	waveform76
21	waveform60	48	waveform45	70	waveform21	98	waveform77
22	waveform61	49	waveform46	71	waveform20	99	waveform78
23	0V	50	0V	72	waveform19	100	0V

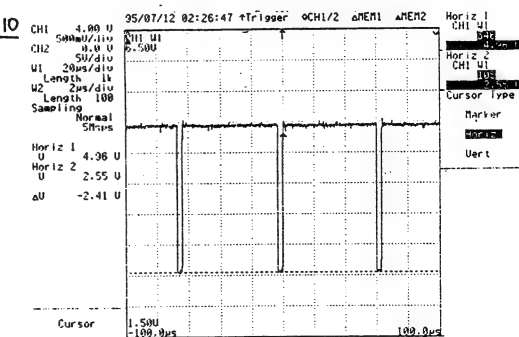
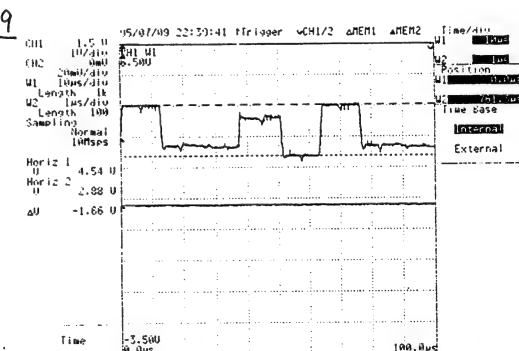
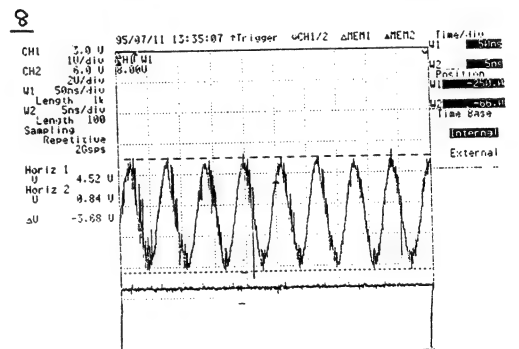
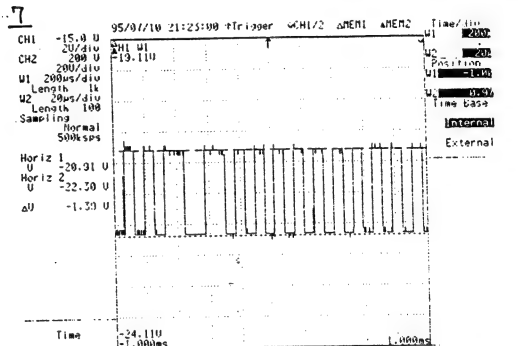
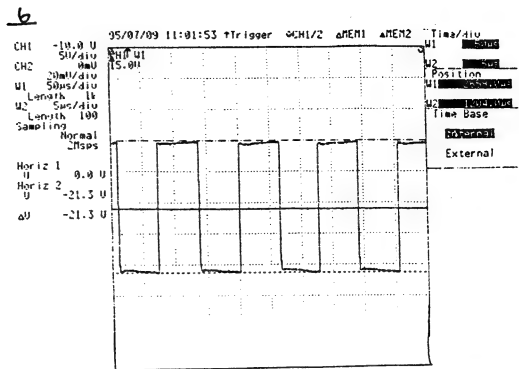
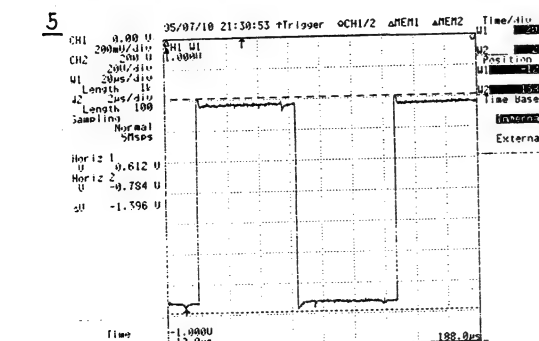
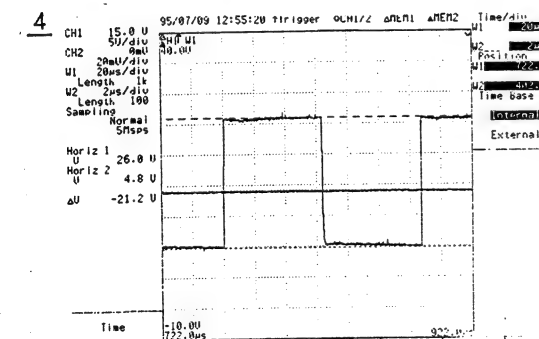
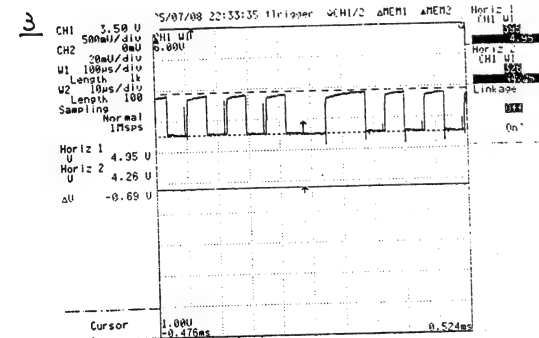
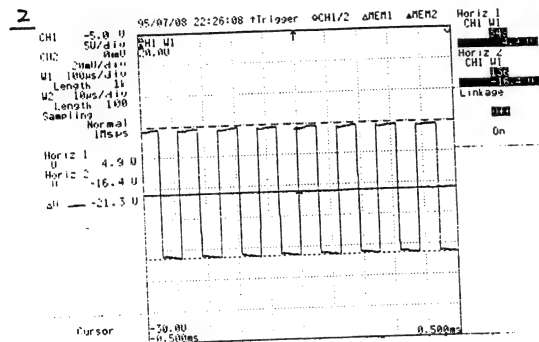
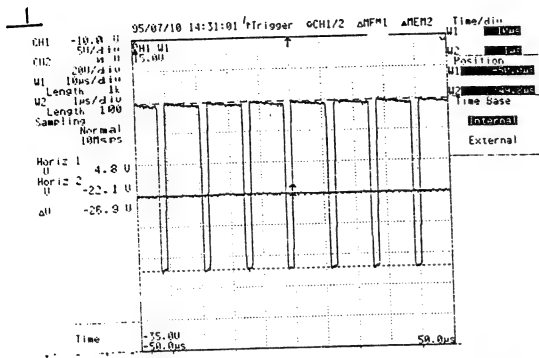
	E	C	B	MODE
Q303	waveform14	0V	waveform9	
Q304	1.56V	0V	waveform11	
Q305	waveform15	0V	1.8V	
Q500	-5.52V	-21.33V	-6.1V	
Q504	4.92V	waveform2	waveform3	
Q540	0V	6.6V	7V	RL - LOW
Q541	7.08V	6.98V	6.3V	BL - High

	1	2	3	4	5	6
Q301	waveform9	waveform10	3.18V	waveform11	waveform12	3.18V
Q302	4.86V	waveform13	3.18V	1.8V	3.79V	3.18V
Q501	0.265V	0V	0.265V	-21.59V	0.265V	0V
Q502	waveform5	waveform5	0V	waveform6	waveform5	0V
Q503	waveform6	waveform7	-21.33V	waveform7	waveform7	-21.33V
Q600	waveform26	waveform26	4.92V	waveform27	waveform26	4.92V
Q601	waveform28	waveform28	4.92V	waveform29	waveform28	4.92V
Q602	waveform30	waveform30	4.92V	waveform31	waveform30	4.92V

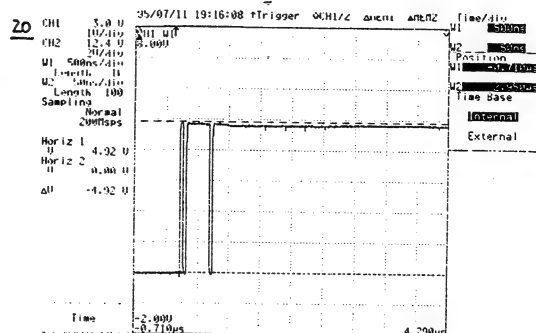
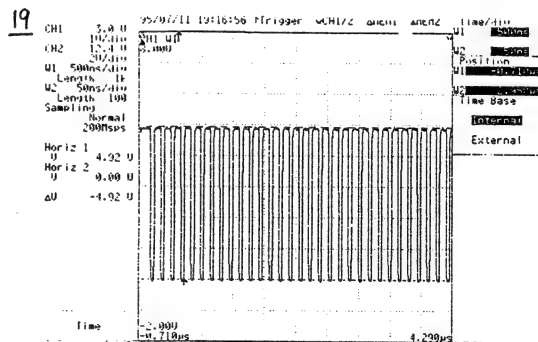
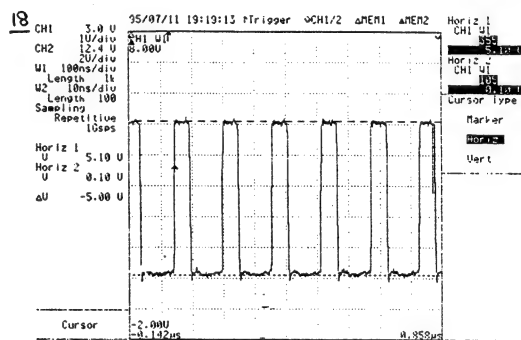
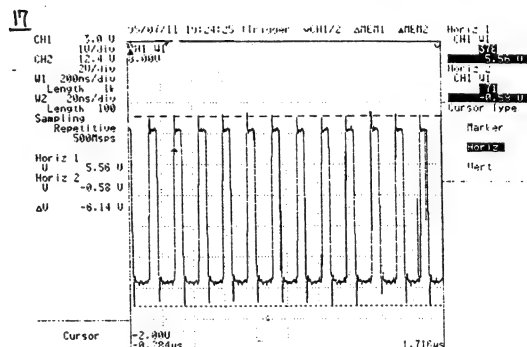
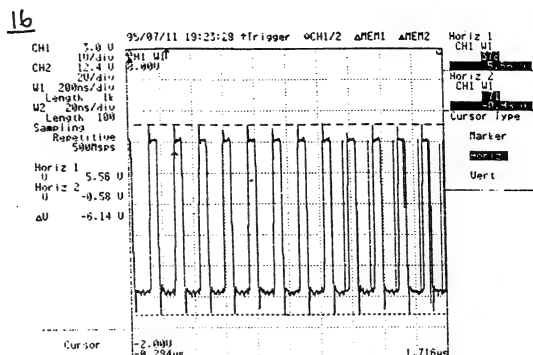
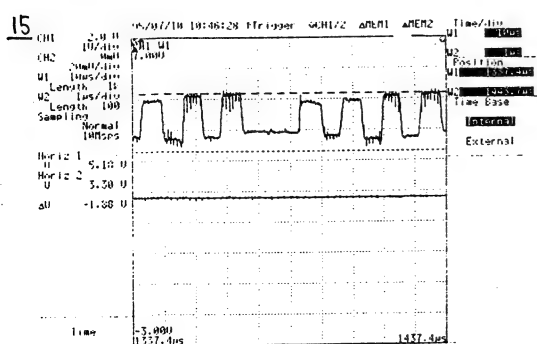
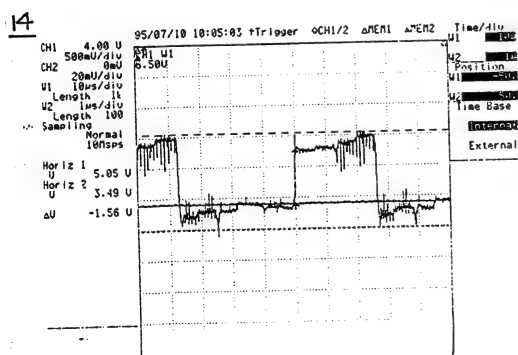
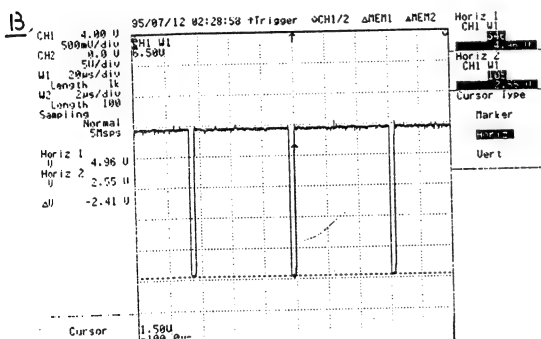
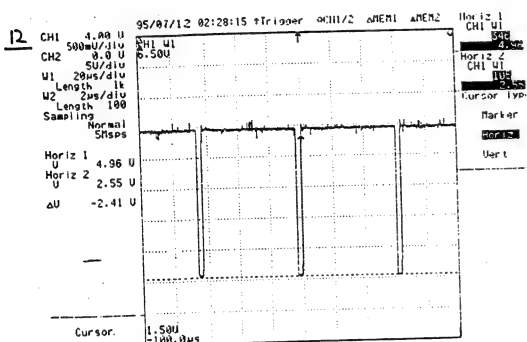
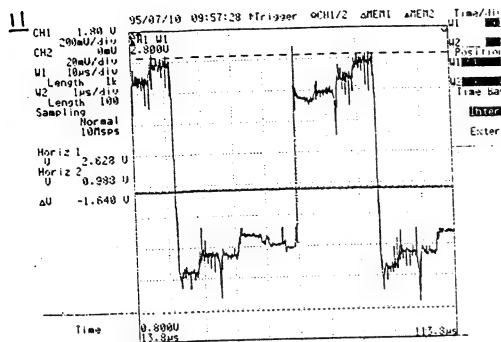
NOTE : For the terminal voltage not mentiond, the voltage indication is omitted for the voltage varies depend on the operation mode.

### [Measuring Conditions]

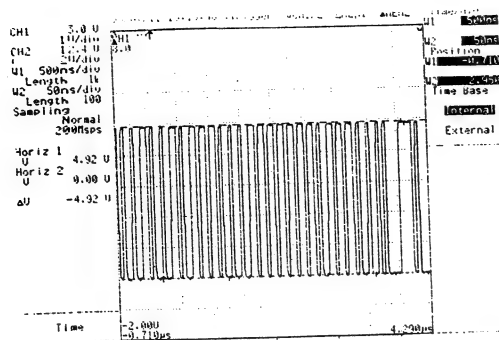
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions : AV Interface Unit Connection



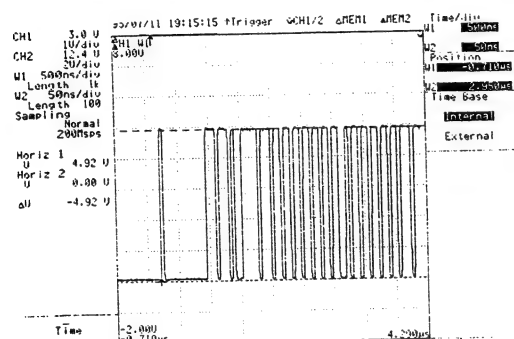
# TVE-M006P



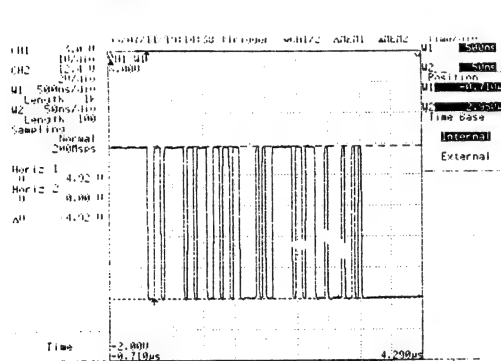
21



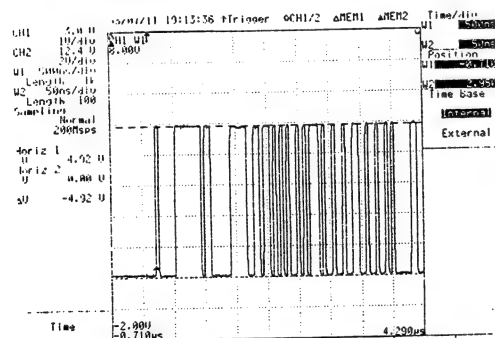
22



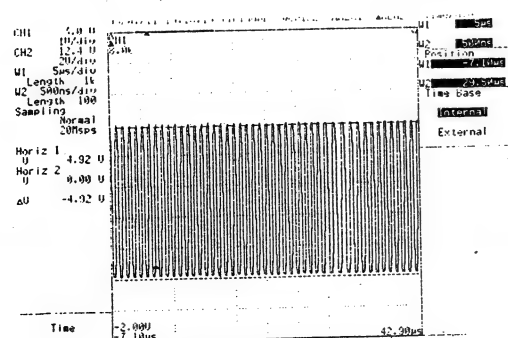
23



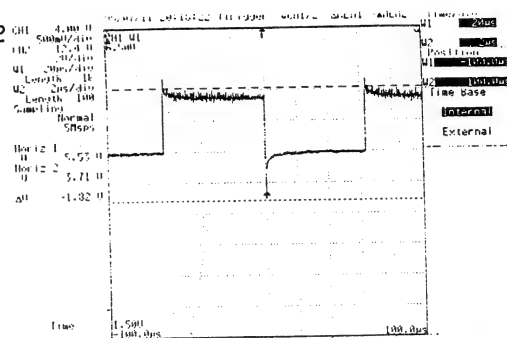
24



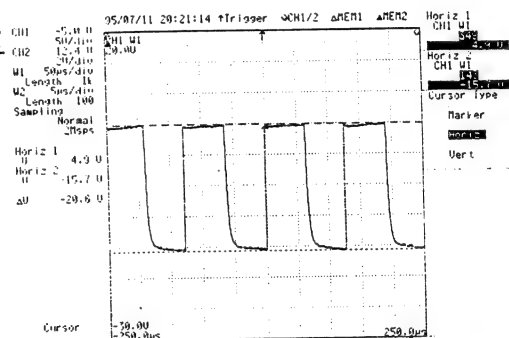
25



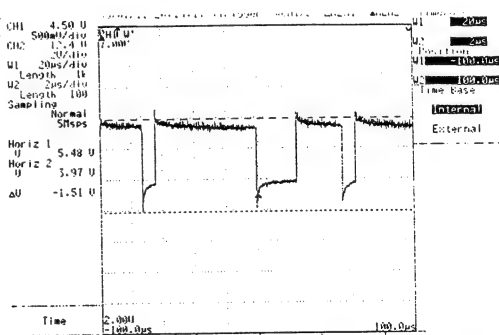
26



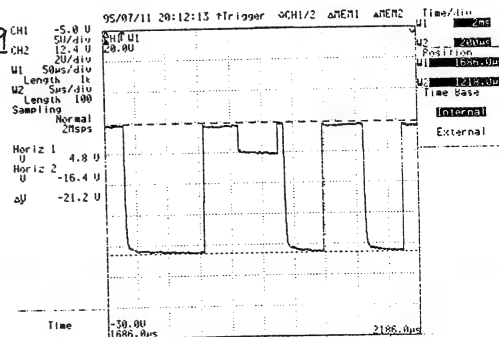
27



28

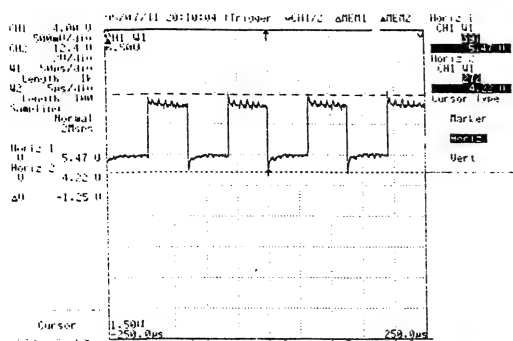


29

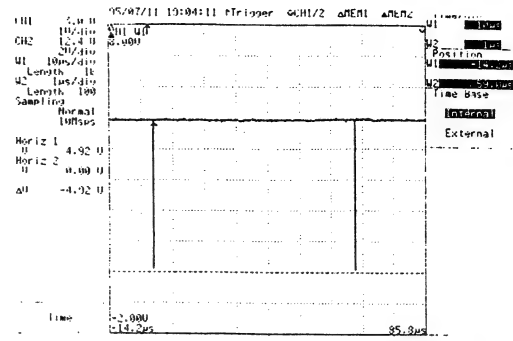


# TVE-M006P

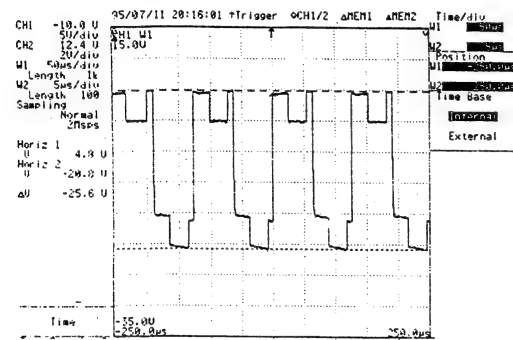
30



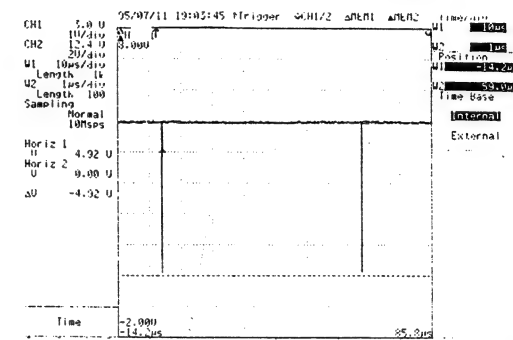
35



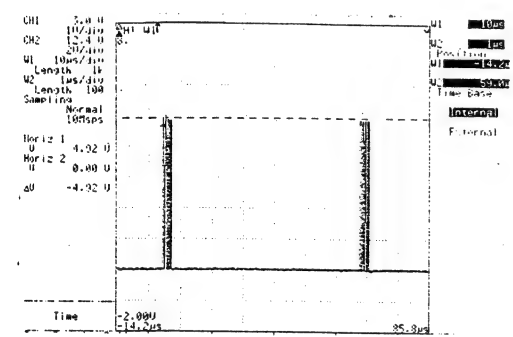
31



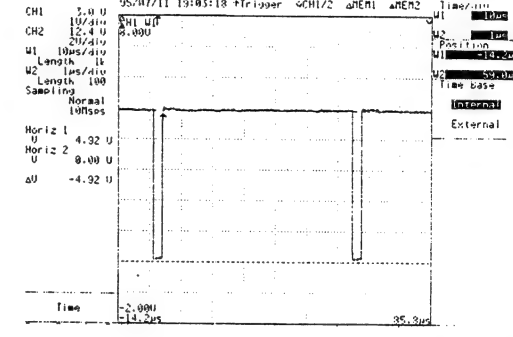
36



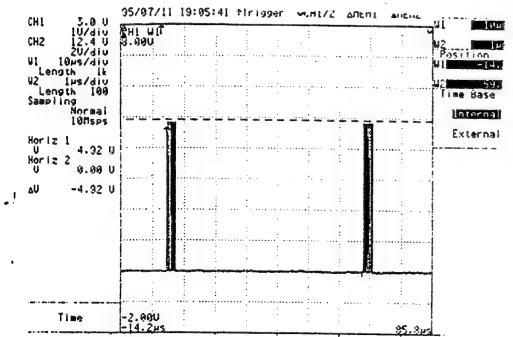
32



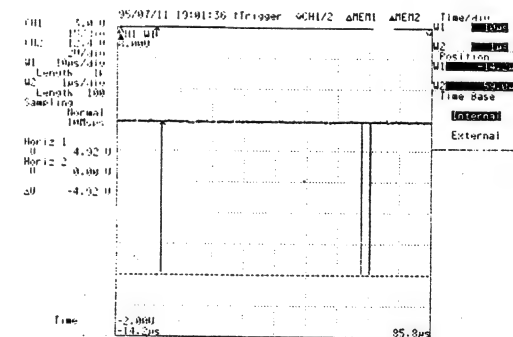
37



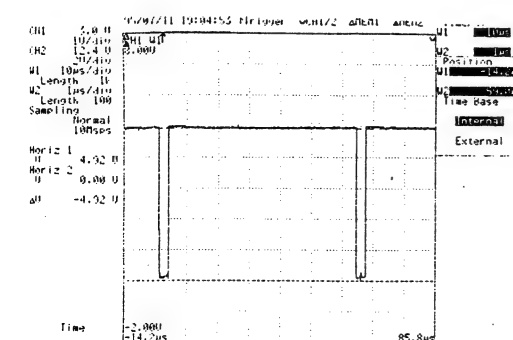
33



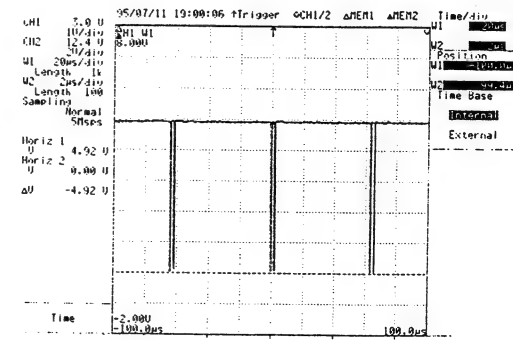
38



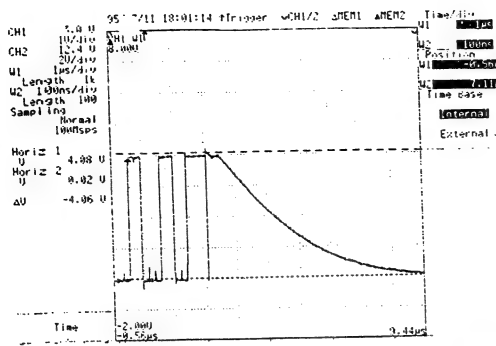
34



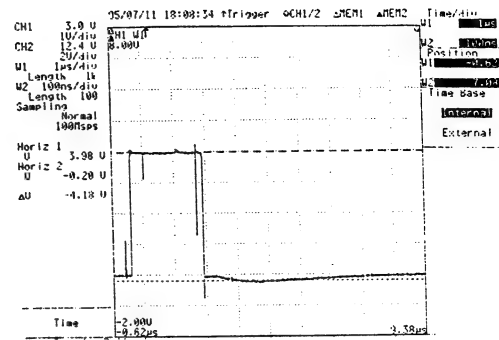
39



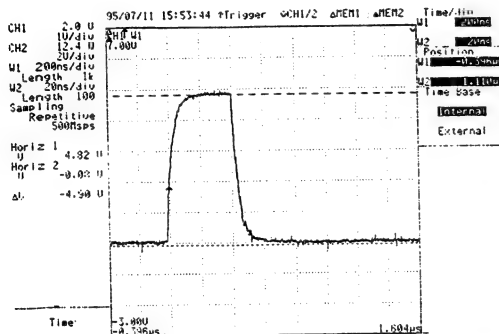
40



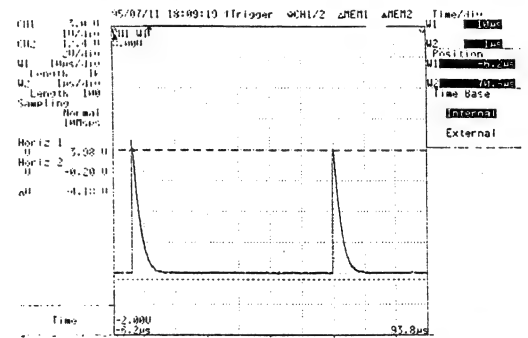
45



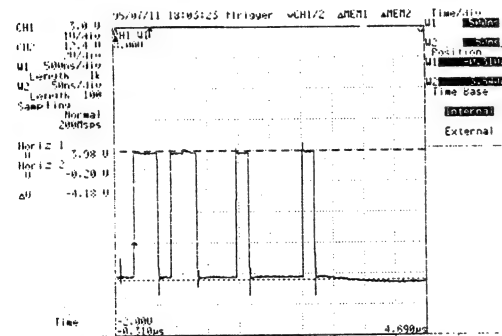
41



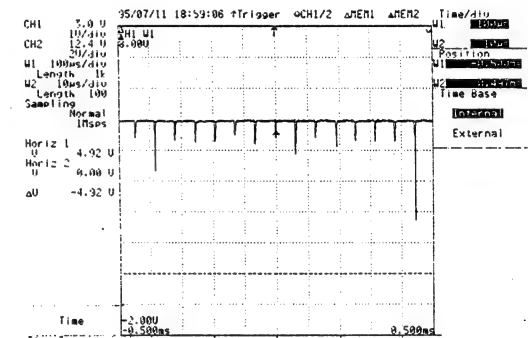
46



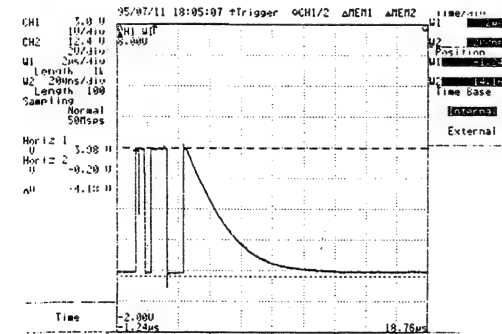
42



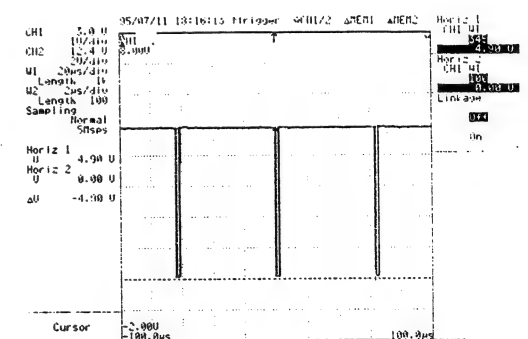
47



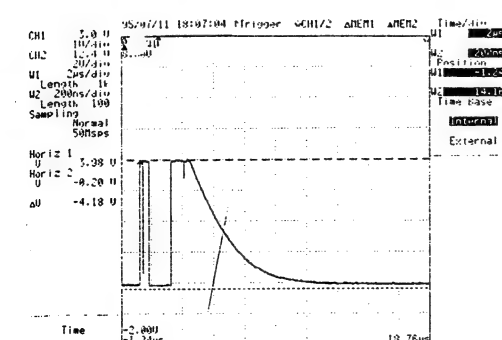
43



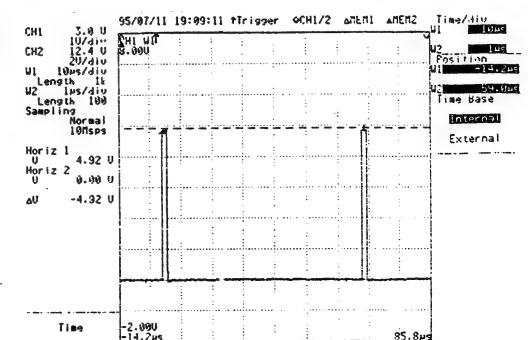
48



44

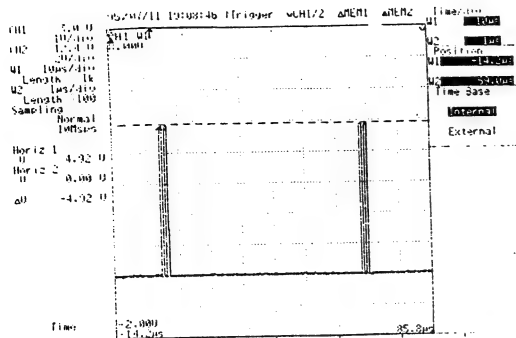


49

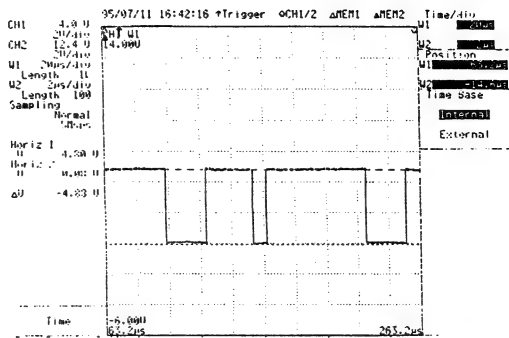




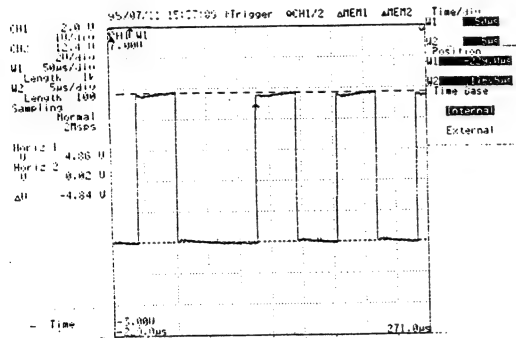
50



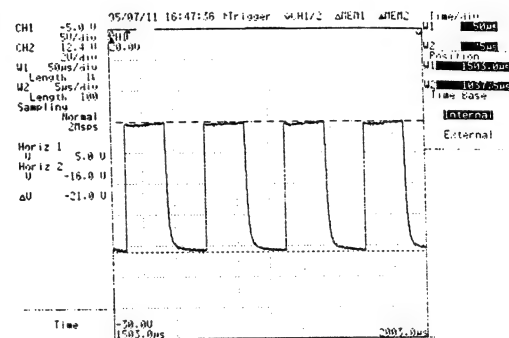
55



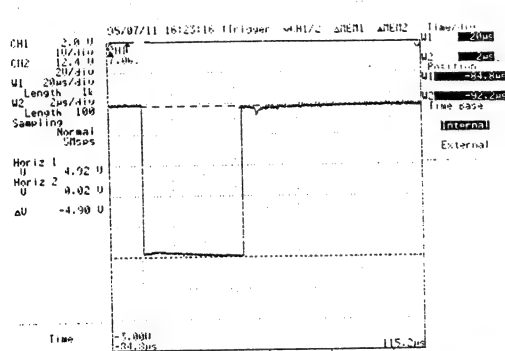
51



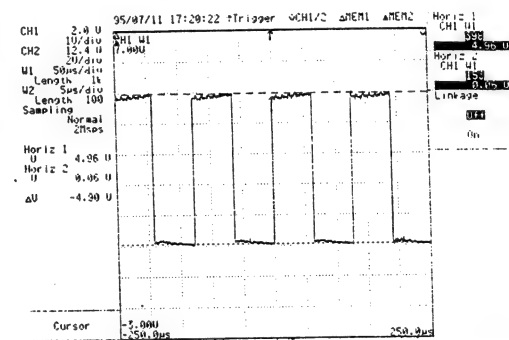
56



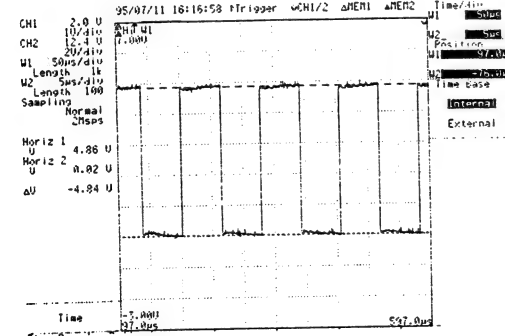
52



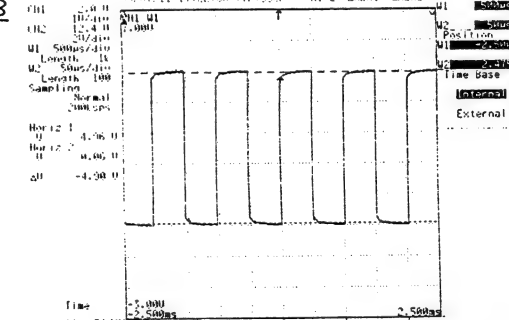
57



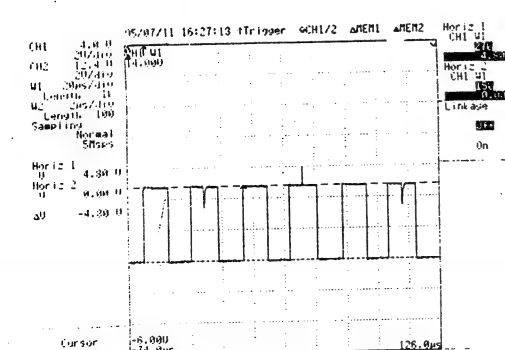
53



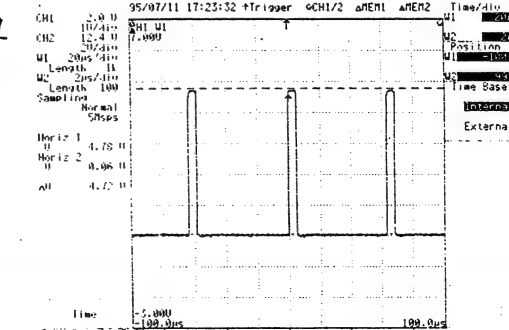
58



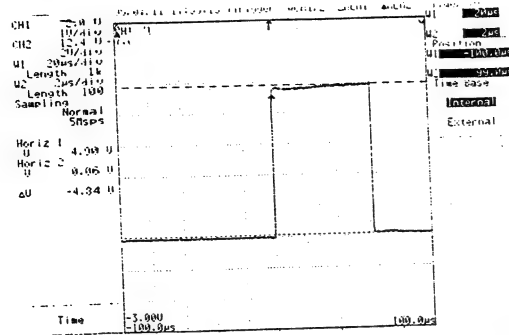
54



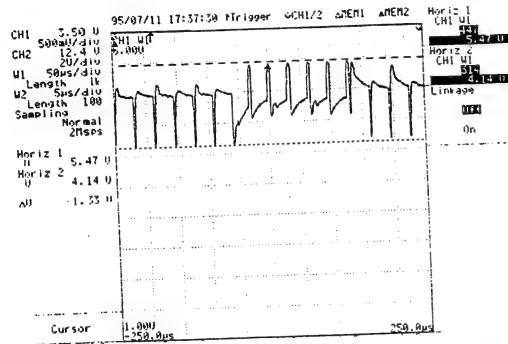
59



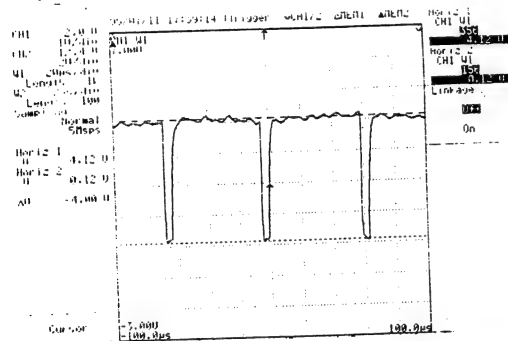
60



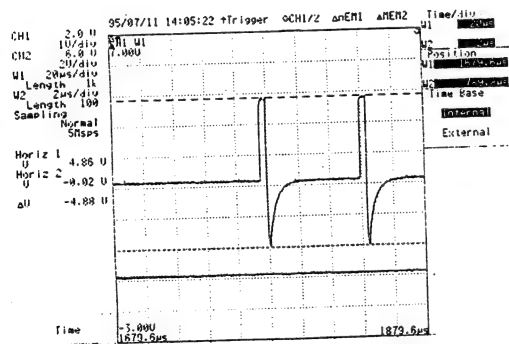
61



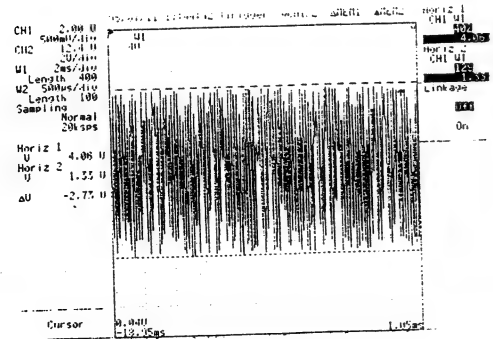
62



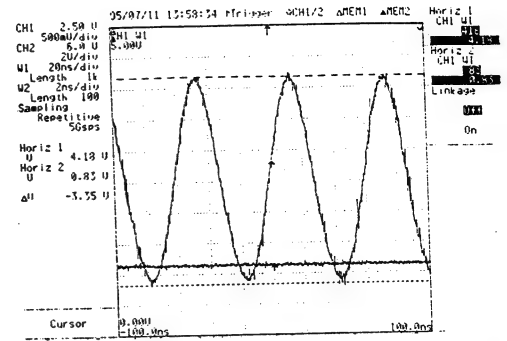
63



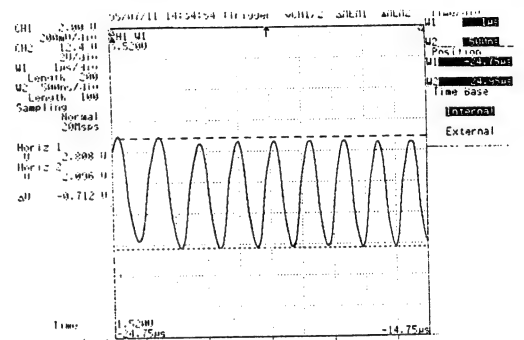
64



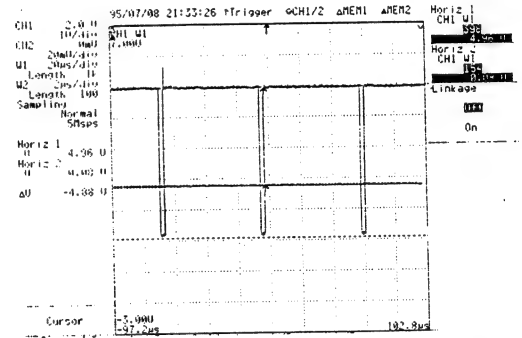
65



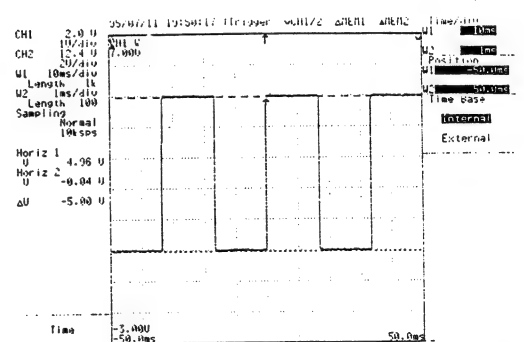
66



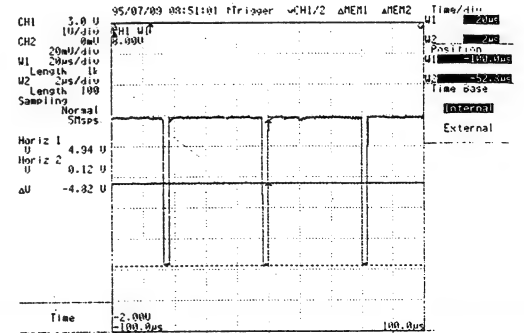
67



68

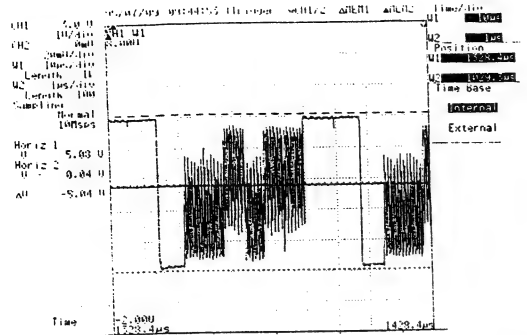


69

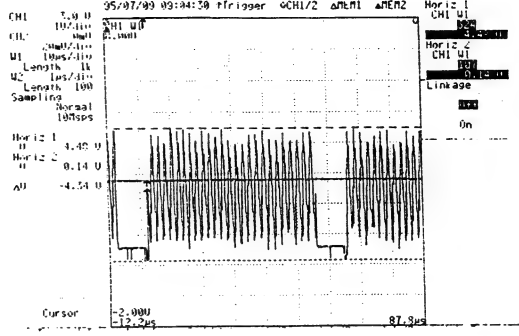


TVE-M006P

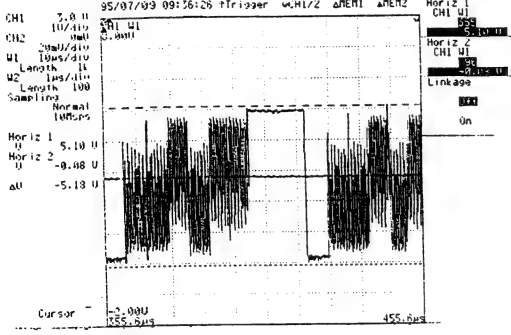
70



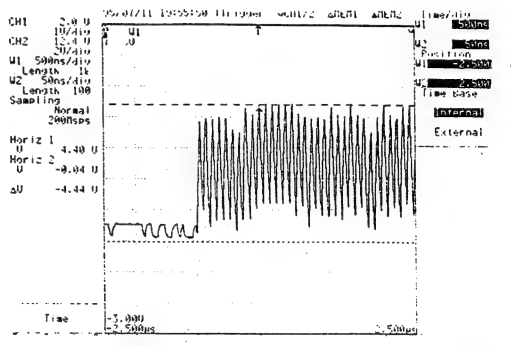
75



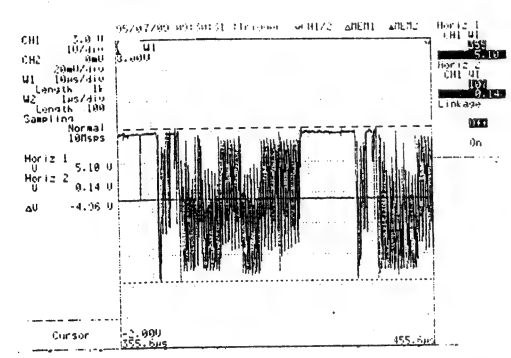
71



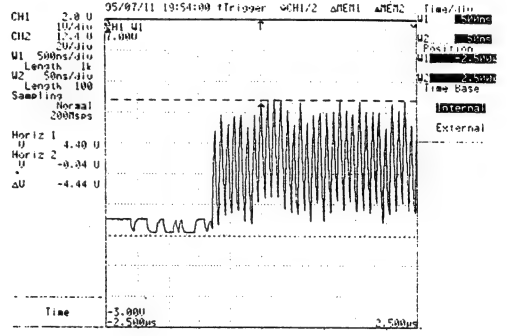
76



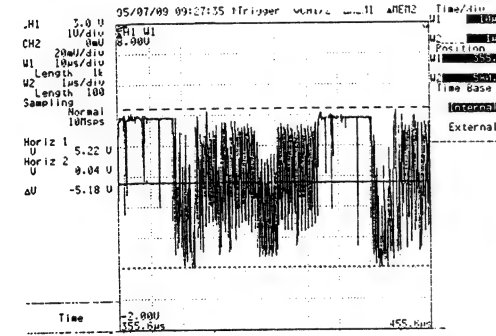
72



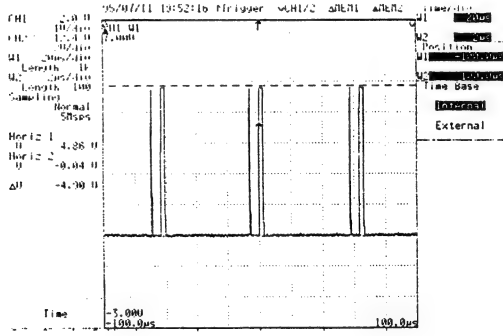
77



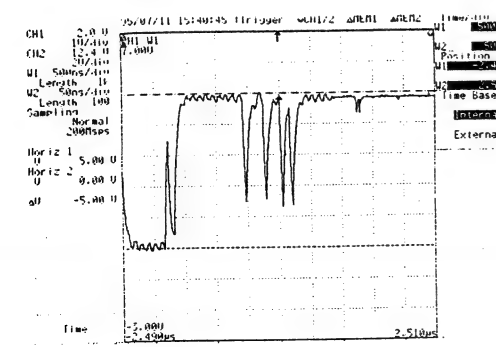
73



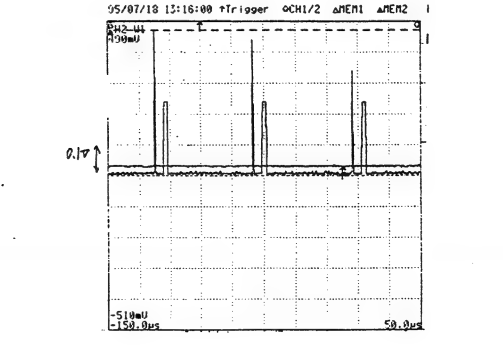
78



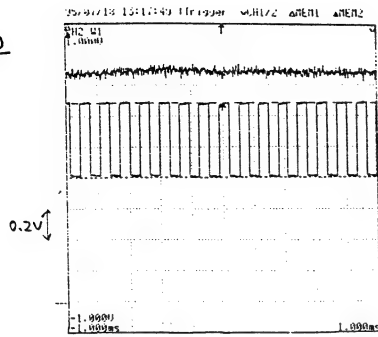
74



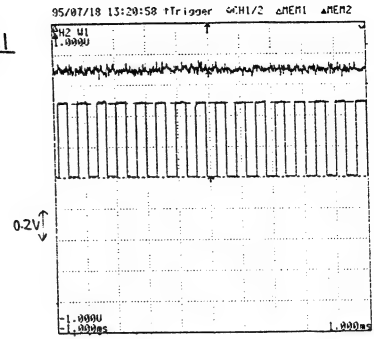
79



80



81



## TVE-M006P

## Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor :  $\mu$ F=microfarads,pF=picofarads

Abbreviations		
RES.= Resistor	CAP.= Capacitor	
C.F.= Carbon Film	ELY.= Electrolytic	
M.F.= Metal Film	CER.= Ceramic	
M.O.= Metal Oxide Film	MYL.= Mylar	
M.P.= Metal Plate	TAN.= Tantalum	
TR. = Transistor	POLY.= Polystyrol	
TRANS.= Transformer	PP. = Polypropylene	
CP. = Chip	PLT.= Polyethylene	
	PF. = Polyester Film	

Symbol No.	Part No.	Description
Coils / Thermistor		
L500	24E24499S01	Inductor, 1mH
L600	24E24500S01	Inductor, CP. 2.7μH
TH500	48E24557S01	Thermistor, CP. 20K ohm

Symbol No.	Part No.	Description
Control P.C.Board		
IC's		
IC300	51E24491S01	LC7480M
IC301	51E24494S01	HA178L05UA
IC500	51E24245S01	BA10358F
IC501	51E24250S01	M5291FP
IC600	51E24492S01	CY7C281A-45JC
IC601	51E24709S01	CI5F-002
Transistors		
Q301	48E24501S01	CP., XN4401
Q302	48E24503S01	CP., XN4601
Q303	48E24502S01	CP., 2SB709A
Q304	48E24502S01	CP., 2SB709A
Q305	48E24502S01	CP., 2SB709A
Q500	48E24502S01	CP., 2SB709A
Q501	48E24503S01	CP., XN4601
Q502	48E24503S01	CP., XN4601
Q503	48E24503S01	CP., XN4601
Q504	48E24502S01	CP., 2SB709A
Q600	48E24503S01	CP., XN4601
Q601	48E24503S01	CP., XN4601
Q602	48E24503S01	CP., XN4601
Diodes		
D500	48E24504S01	CP., MA142WK
D501	48E24510S01	CP., RB110C
ZD500	48E24509S01	Zener, CP. MA3160-H
ZD501	48E24505S01	Zener, CP. MA3300-M
ZD600	48E24506S01	Zener, CP. MA3033-H
ZD601	48E24508S01	Zener, CP. MA3075-H
VD600	48E24507S01	Varactor, CP. 1T363

Symbol No.	Part No.	Description
Capacitors		
C300	08E24547S01	CP., 0.01μF
E300	23E24555S01	ELY., 100μF / 16V
E301	23E24555S01	ELY., 100μF / 16V
C302	08E24540S01	CP., 1μF
E302	23E24550S01	ELY., 100μF / 6.3V
C303	08E24540S01	CP., 1μF
C304	08E24541S01	CP., 0.33μF
C305	08E24541S01	CP., 0.33μF
C306	08E24541S01	CP., 0.33μF
E306	23E24554S01	ELY., 10μF / 16V
C307	08E24547S01	CP., 0.01μF
C397	23E24556S01	ELY., (B.P) 10μF / 16V
C398	23E24556S01	ELY., (B.P) 10μF / 16V
C399	23E24556S01	ELY., (B.P) 10μF / 16V
C500	08E24544S01	CP., 470pF
C501	08E24549S01	CP., 0.033μF
E501	23E24553S01	ELY., 47μF / 16V
C502	08E24543S01	CP., 0.1μF
E502	23E24552S01	ELY., 22μF / 35V
E503	23E24552S01	ELY., 22μF / 35V
C504	08E24548S01	CP., 4700pF
E504	23E24551S01	ELY., 3.3μF / 50V
C505	08E24547S01	CP., 0.01μF
E505	23E24554S01	ELY., 10μF / 16V
C599	23E24556S01	ELY., (B.P) 10μF / 16V
C600	08E24541S01	CP., 0.33μF
C601	08E24545S01	CP., 1000pF
C602	08E24545S01	CP., 1000pF
C603	08E24539S01	CP., 110pF
C604	08E24546S01	CP., 0.1μF
C605	08E24541S01	CP., 0.33μF
C607	08E24545S01	CP., 1000pF
C608	08E24541S01	CP., 0.33μF
C609	08E24545S01	CP., 1000pF
C610	08E24545S01	CP., 1000pF
C611	08E24545S01	CP., 1000pF
C612	08E24545S01	CP., 1000pF
C613	08E24541S01	CP., 0.33μF
C614	08E24544S01	CP., 470pF

# TVE-M006P

Symbol No.	Part No.	Description
C615	08E24544S01	CP., 470pF
C616	08E24542S01	CP., 150pF
C617	08E24544S01	CP., 470pF
C618	08E24540S01	CP., 1μF
C619	08E24547S01	CP., 0.01μF
C620	08E24547S01	CP., 0.01μF
C621	08E24547S01	CP., 0.01μF
(All resistors are chip 1/10W±5% unless otherwise noted.)		
<b>Resistors</b>		
R300	06E24513S01	1K ohm
R302	06E24538S01	1K ohm 1/16W × 4
R303	06E24530S01	3.3 ohm
R304	06E24520S01	220 ohm
R305	06E24520S01	220 ohm
R306	06E24520S01	220 ohm
R308	06E24526S01	3.3K ohm
R310	06E24526S01	3.3K ohm
R313	06E24526S01	3.3K ohm
R314	06E24531S01	4.7K ohm
R315	06E24516S01	1.6K ohm
R316	06E24533S01	5.6K ohm
R317	06E24521S01	2.2K ohm
R318	06E24521S01	2.2K ohm
R319	06E24521S01	2.2K ohm
R500	06E24527S01	33K ohm
R502	06E24518S01	18K ohm
R503	06E24517S01	16K ohm
R504	06E24536S01	82K ohm
R505	06E24528S01	3.9K ohm
R506	06E24527S01	33K ohm
R507	06E24535S01	820 ohm
R508	06E24529S01	39K ohm
R509	06E24534S01	680 ohm
R510	06E24524S01	2.2 ohm
R511	06E24524S01	2.2 ohm
R512	06E24515S01	12K ohm
R513	06E24519S01	22 ohm
R514	06E24531S01	4.7K ohm
R515	06E24535S01	820 ohm
R516	06E24531S01	4.7K ohm
R600	06E24531S01	4.7K ohm
R601	06E24523S01	27K ohm
R602	06E24525S01	330 ohm
R603	06E24532S01	47K ohm
R604	06E24514S01	10K ohm
R606	06E24532S01	47K ohm

Symbol No.	Part No.	Description
R607	06E24532S01	47K ohm
R612	06E24519S01	22 ohm
R613	06E24519S01	22 ohm
R614	06E24537S01	100 ohm 1/16W × 4
R615	06E24530S01	3.3 ohm
R616	06E24521S01	2.2K ohm
R617	06E24522S01	2.7K ohm
R618	06E24522S01	2.7K ohm
R620	06E24512S01	100 ohm
VR500	18E24498S01	Variable, 10K ohm
VR600	18E24497S01	Variable, 50K ohm
<b>SUB (1) P.C.Board</b>		
<b>IC's</b>		
IC160	51E24280S01	NJM386M
IC540	51E24245S01	BA10358F
<b>Transistors</b>		
Q540	48E24270S01	CP., UN2213
Q541	48E24679S01	CP., 2SB1205
Q901	48E24289S01	CP., 2SD1758
Q902	48E24289S01	CP., 2SD1758
<b>Diode</b>		
D540	48E24504S01	MA142WK
<b>Coil / Transformer</b>		
L900	24E24678S01	Inductor, 100μH
T900	25E24677S01	Transformer, Power 3000559
<b>Switches / Fuse</b>		
S500	40E24281S01	Slide, ESD11H120 (POWER)
S501	40E24281S01	Slide, ESD11H120 (DIMMER)
F540	65E24287S01	Fuse, CCP2E13 (0.52A)
<b>Capacitors</b>		
E161	23E24688S01	ELY., 220μF / 10V
E162	23E24689S01	ELY., 100μF / 6.3V
E163	23E24690S01	ELY., 22μF / 16V
C166	08E24648S01	CP., 0.1μF
C167	08E24648S01	CP., 0.1μF

# TVE-M006P

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
C168	08E24662S01	CP., 2200pF			
E440	23E24689S01	ELY., 100μF / 6.3V			
E540	23E24687S01	ELY., 33μF / 16V			
E541	23E24690S01	ELY., 22μF / 16V			
C900	08E24694S01	ECQV1J124JM, 0.12μF			
E900	23E24692S01	ELY., 100μF / 16V			
C901	08E24686S01	DE0707SL470J3K, 47pF			
C902	08E24686S01	DE0707SL470J3K, 47pF			
C903	08E24654S01	CP., 0.022μF			
C999	08E24545S01	CP., 1000pF			
(All resistors are chip 1/10W±5% unless otherwise noted.)					
<b>Resistors</b>					
R170	06E24512S01	100 ohm			
R171	06E24512S01	100 ohm			
R172	06E24512S01	100 ohm			
R173	06E24518S01	18K ohm			
R174	06E24513S01	1K ohm			
R545	06E24683S01	10 ohm 1/8W			
R546	06E24682S01	620 ohm			
R547	06E24681S01	ERG1SG150P, 15 ohm 1W			
R548	06E24616S01	180 ohm 1/4W			
R549	06E24616S01	180 ohm 1/4W			
R550	06E24680S01	ERG1SG120P, 12 ohm 1W			
R551	06E24680S01	ERG1SG120P, 12 ohm 1W			
R900	06E24513S01	1K ohm			
<b>SUB (2) P.C.Board</b>					
<b>IC</b>					
IC405	51E24290S01	PNA4602M00LB			
<b>LED</b>					
LD500	48E24693S01	LED, SLR-33DU (ORG)			
<b>Miscellaneous</b>					
ET201	09E24707S01	16P Connector (From AV Interface Unit)			
LCD901	01E24708S01	Assy., LCD Unit (Included Assy., Control P.C.Board)			
SP101	50E23432S01	Speaker			
VR160	18E24288S01	Volume, 5K ohm (VOLUME)			

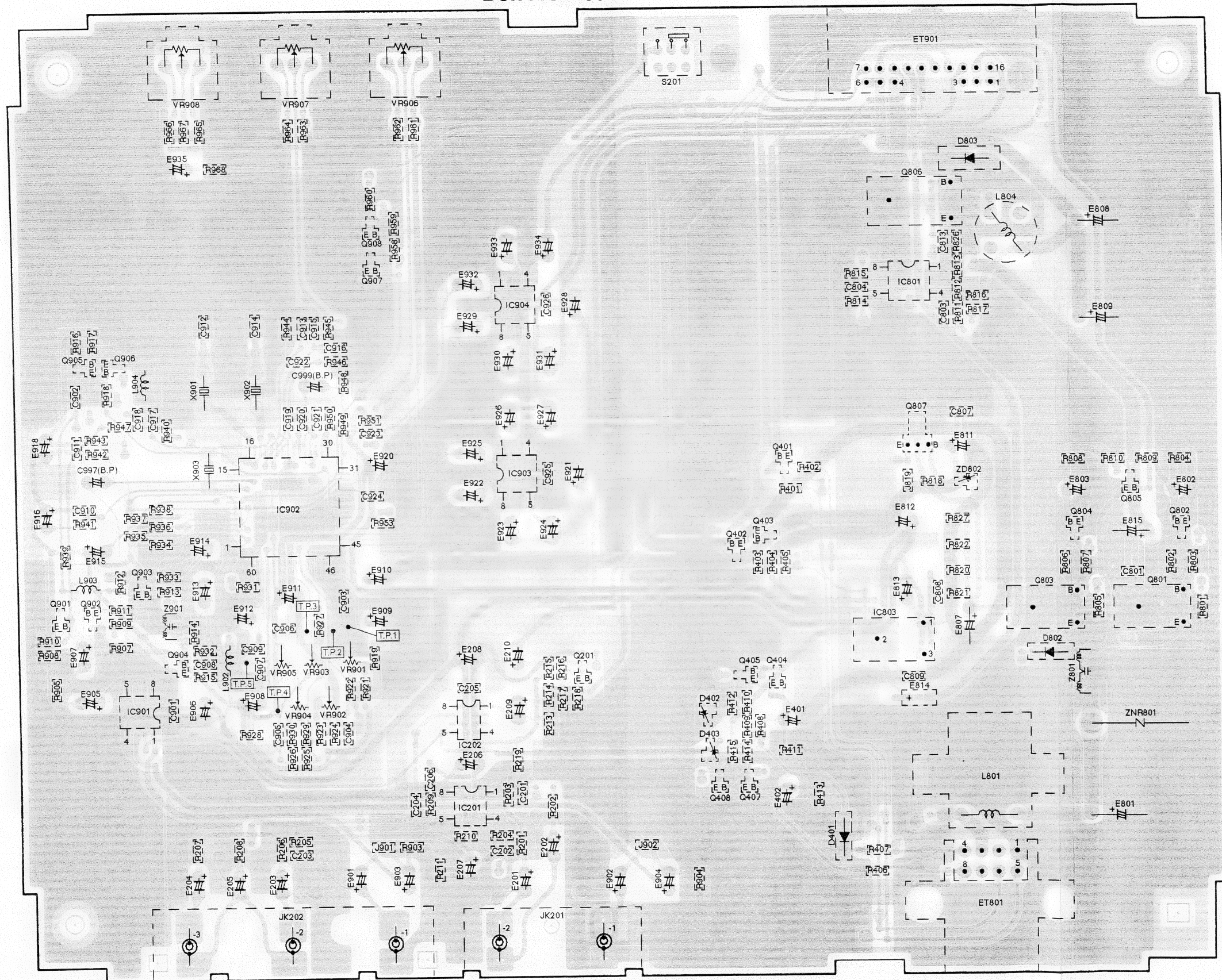


# Parts Layout on P.C.Boards and Wiring Diagram

TVE-M006P

All P.C.Boards viewed from soldered side.

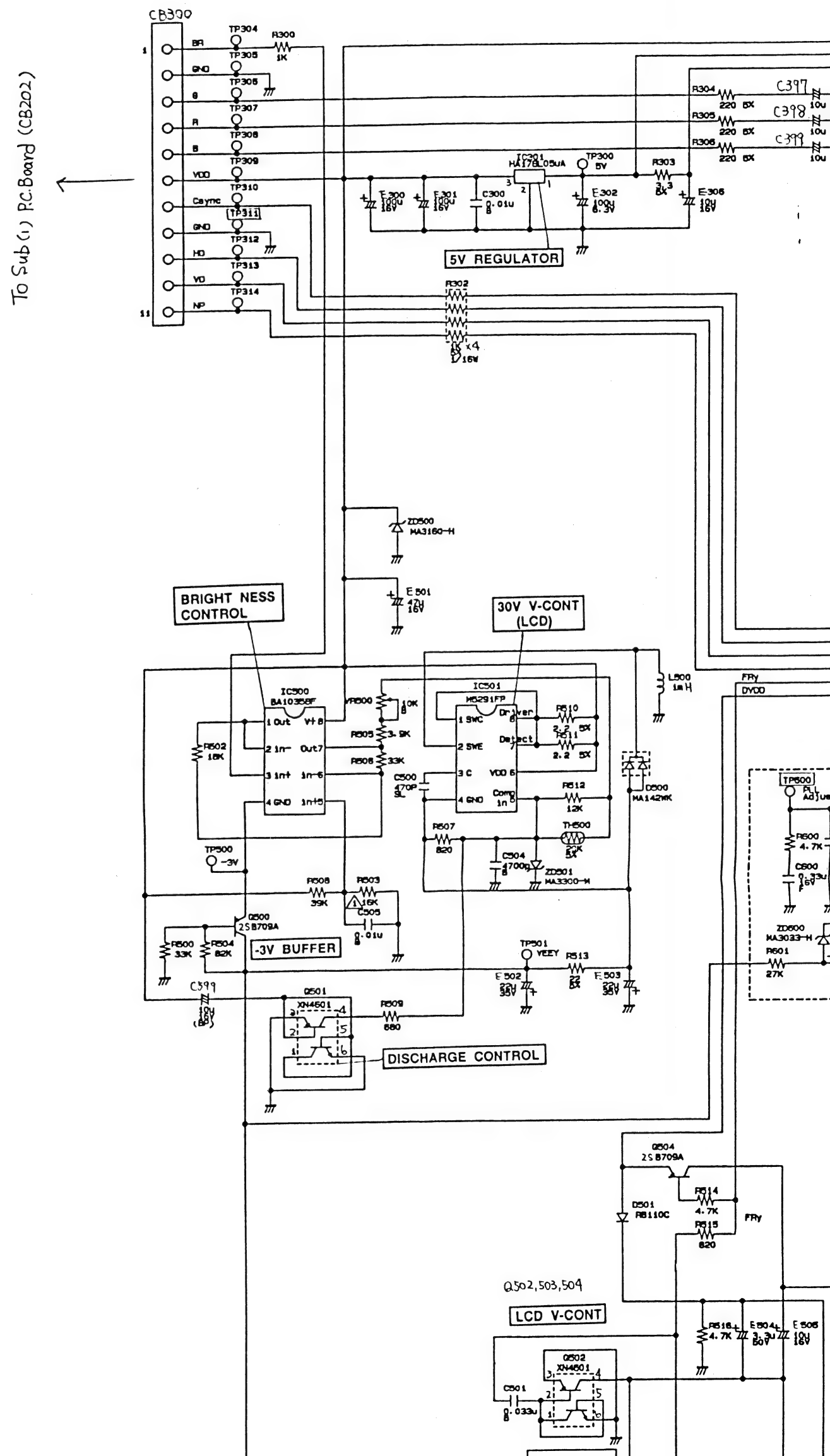
Box P.C.Board

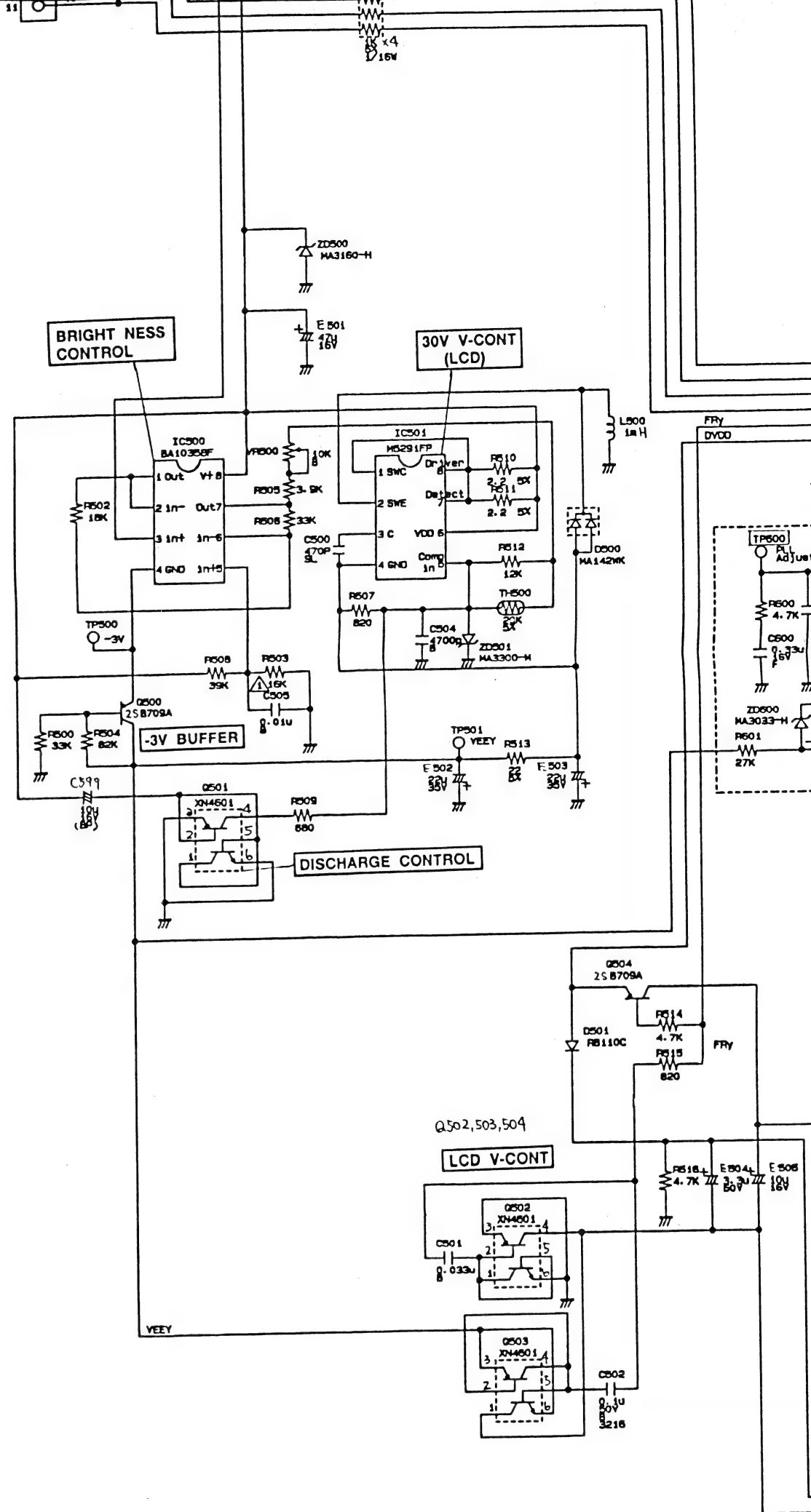


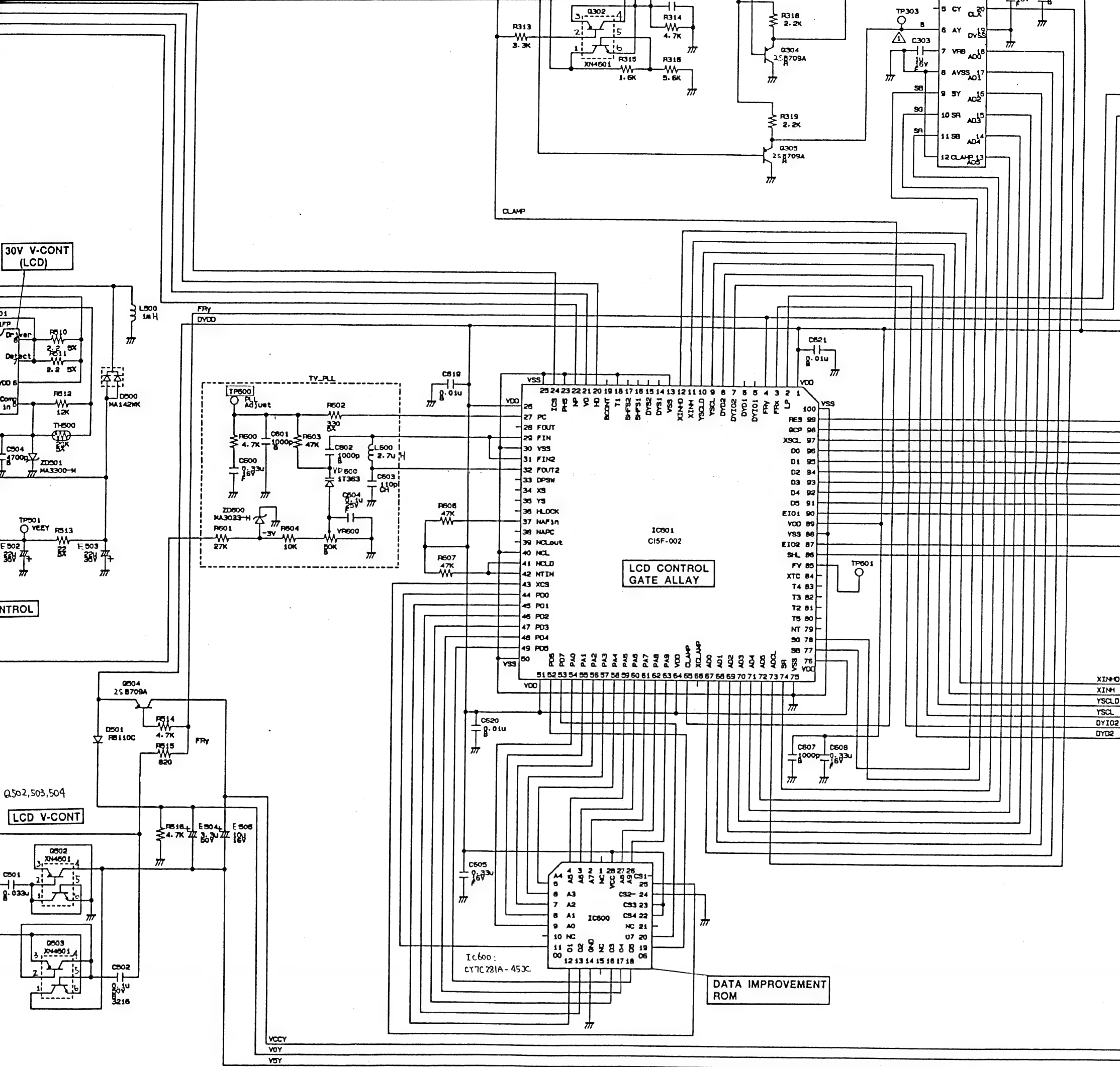
Orange Color Pattern :Component Side Pattern  
Blue Color Pattern :Foil Side Pattern

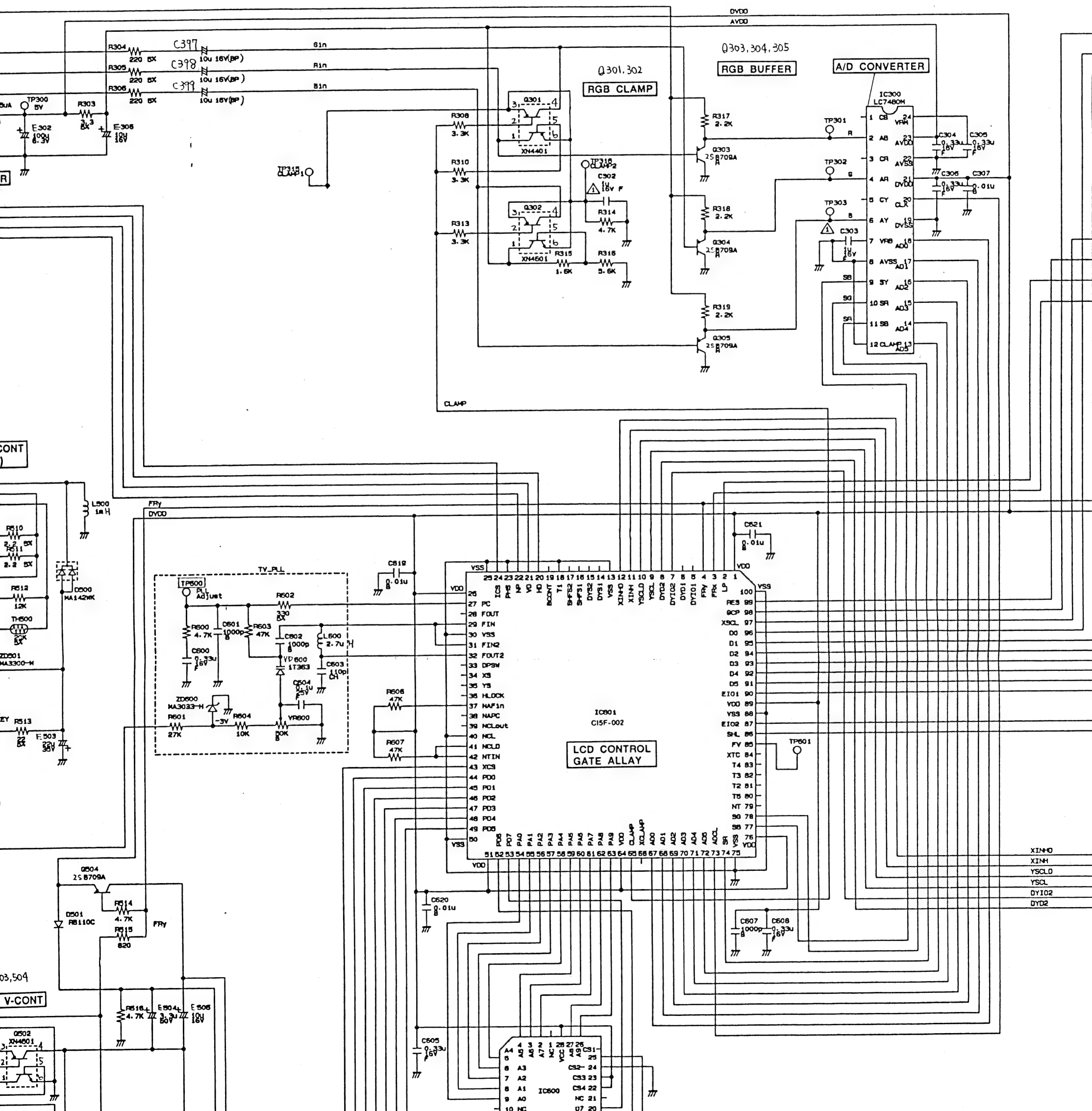


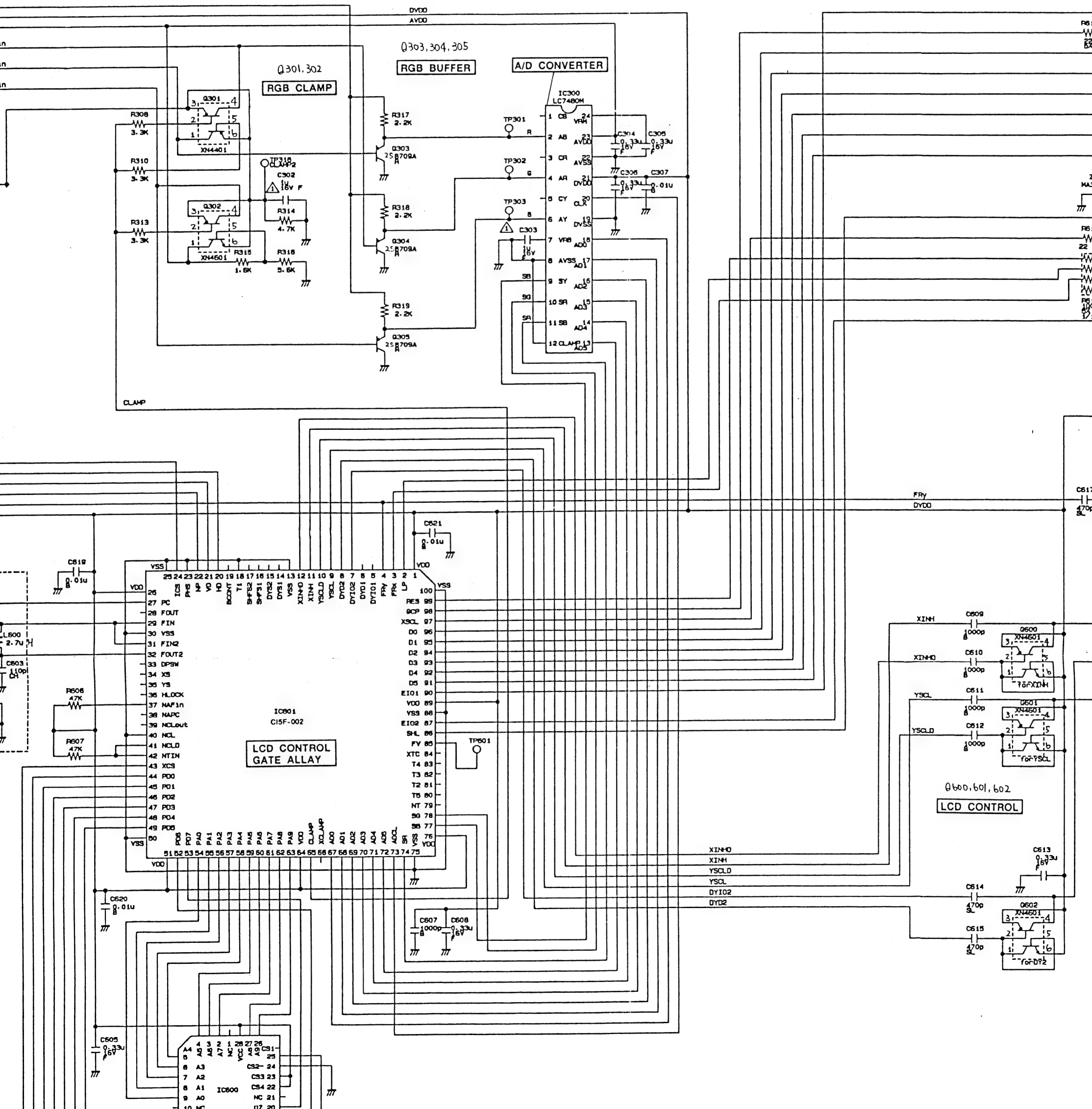
# Schematic Diagram (1/2)

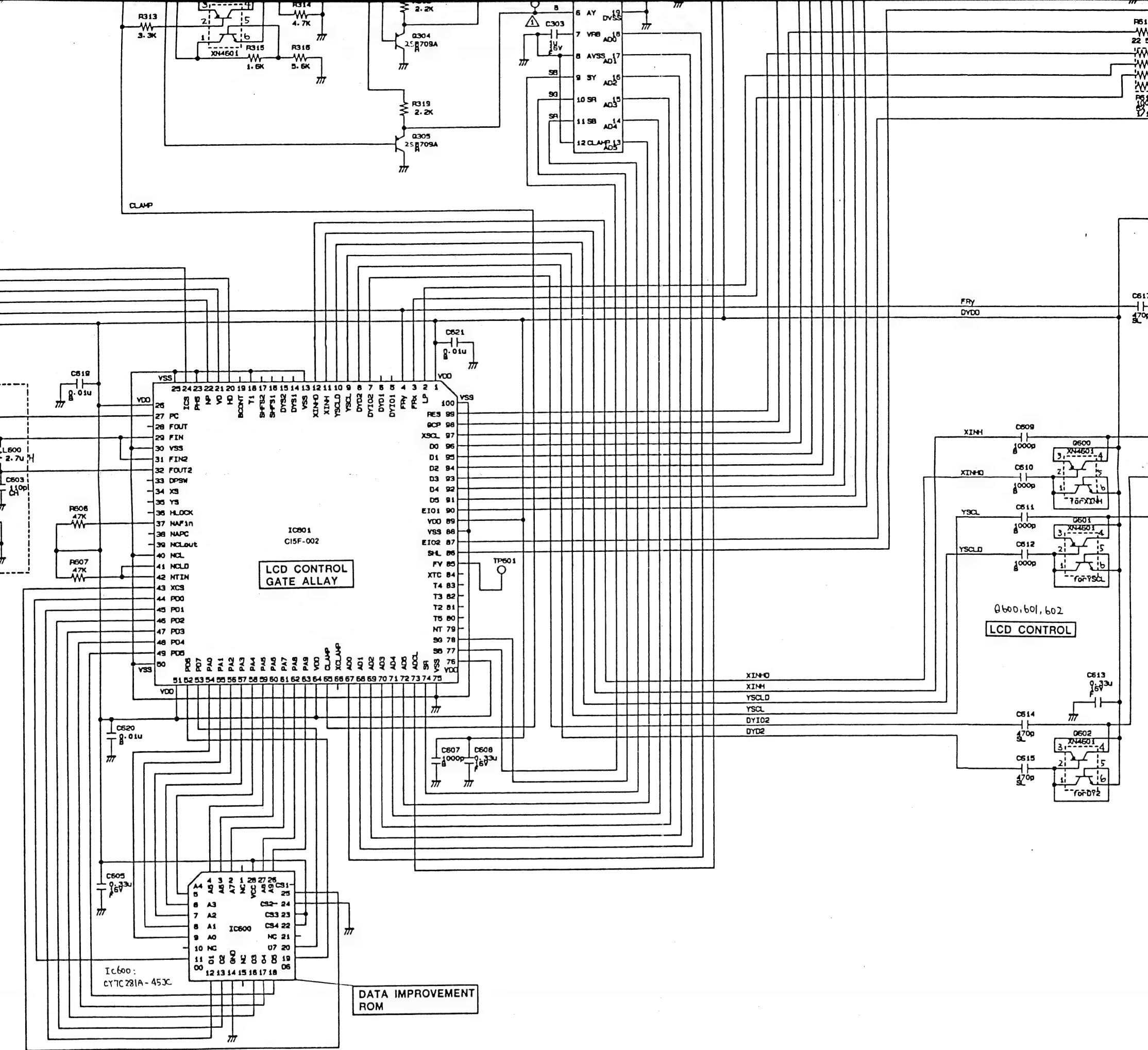






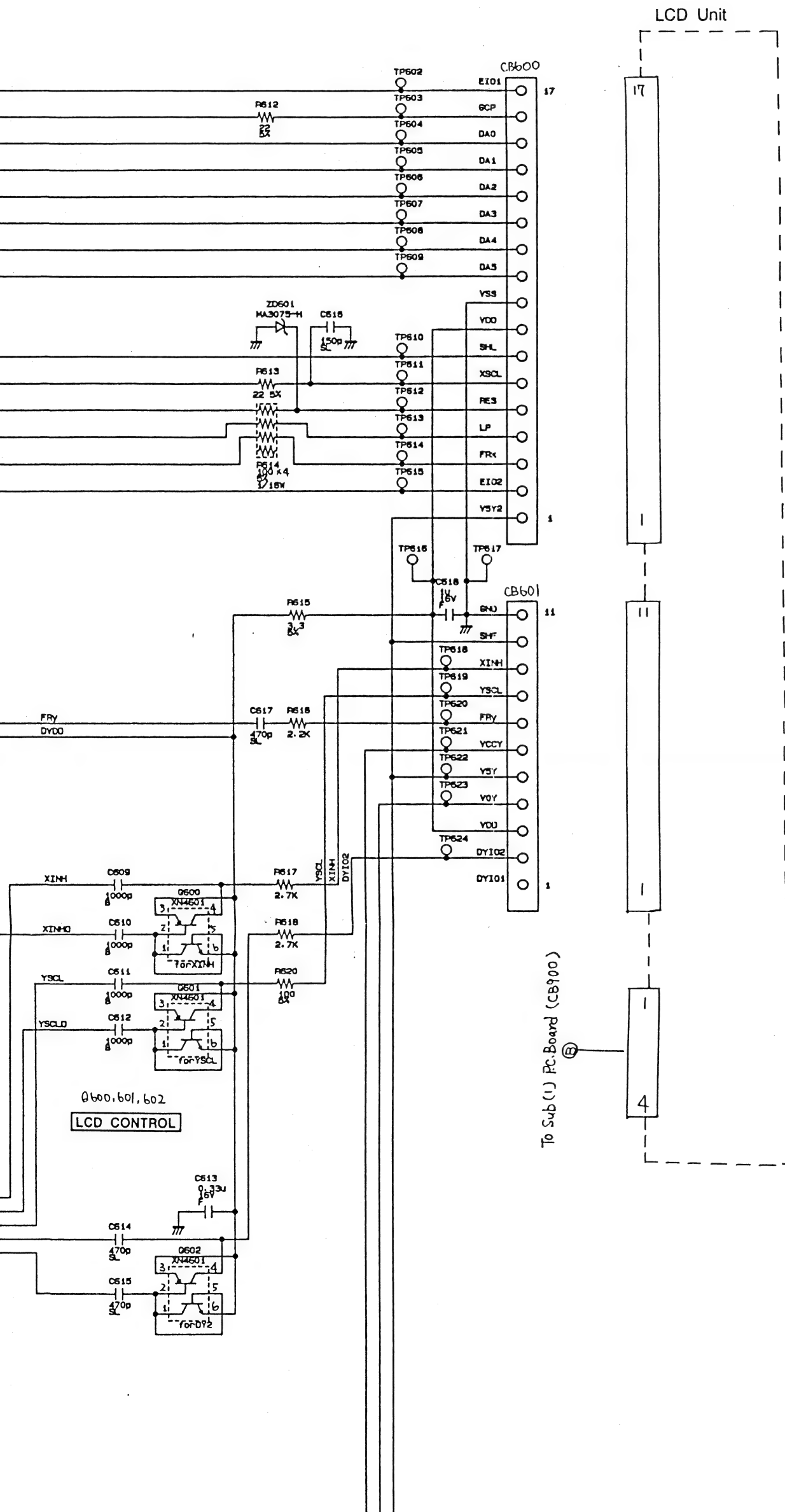


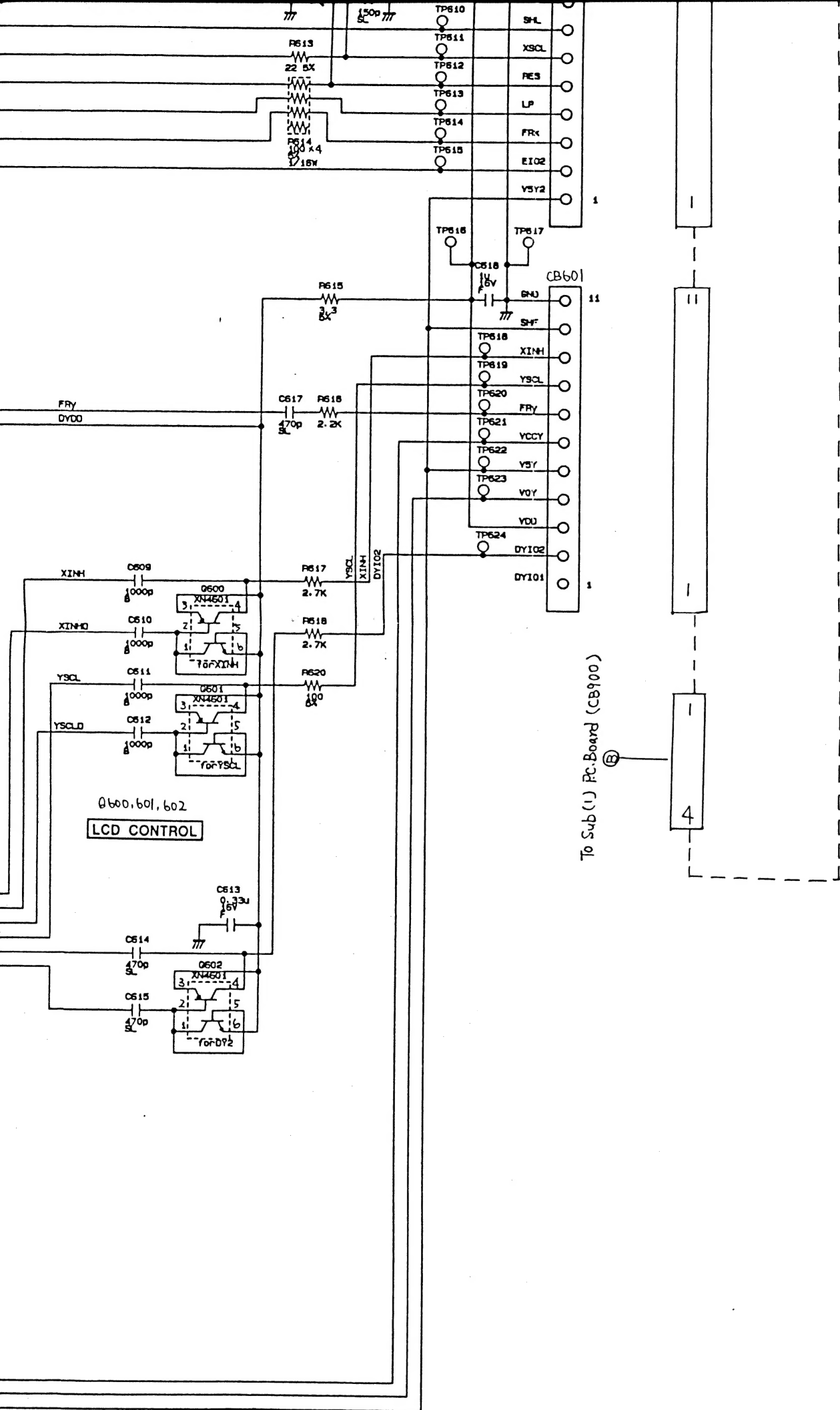




Control P.C.Board

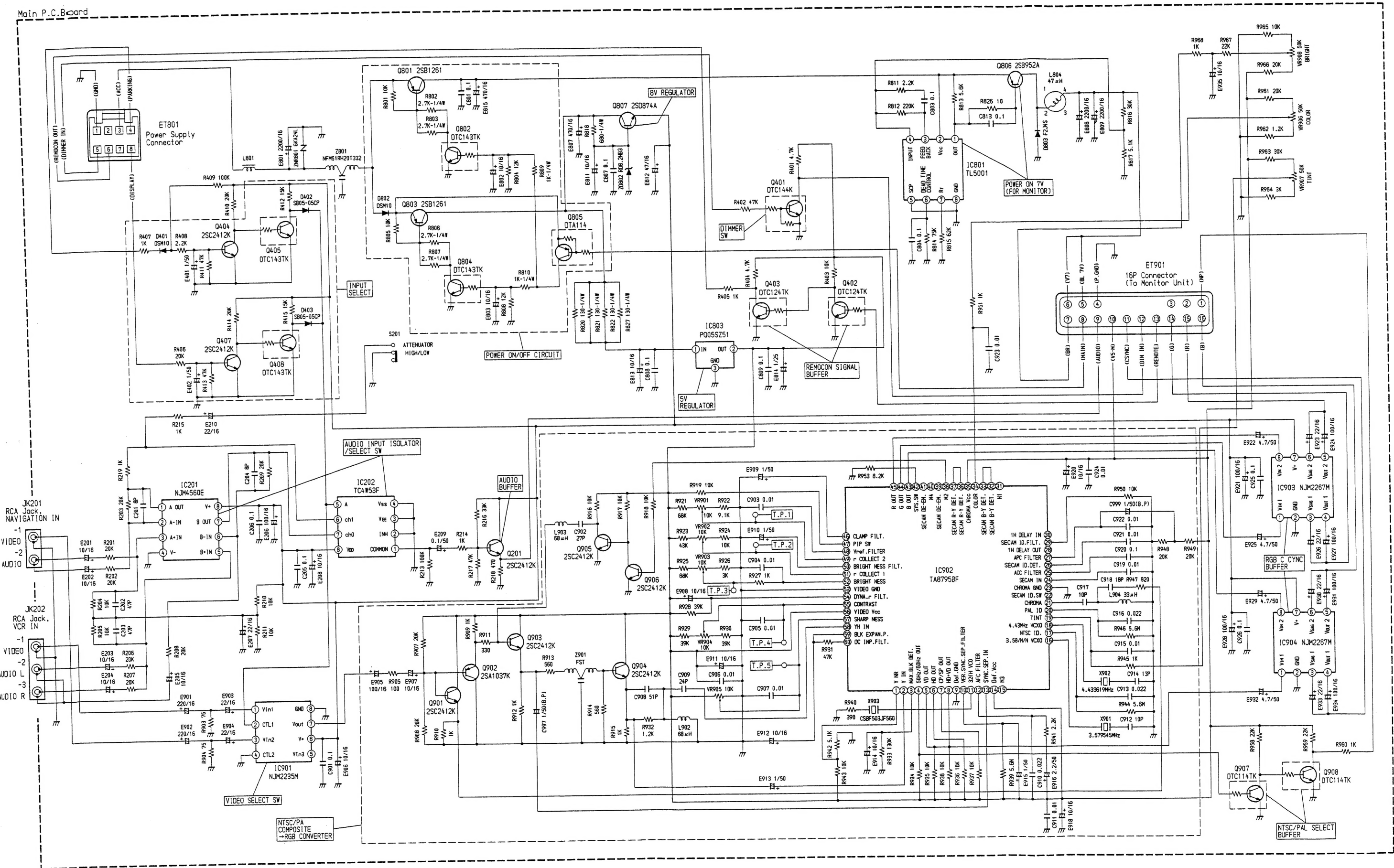
# TVE-M006P







Schematic Diagram



**TVE-M006P**

**All P.C.Boards viewed from soldered side.**

**Sub (1) P.C.Board**

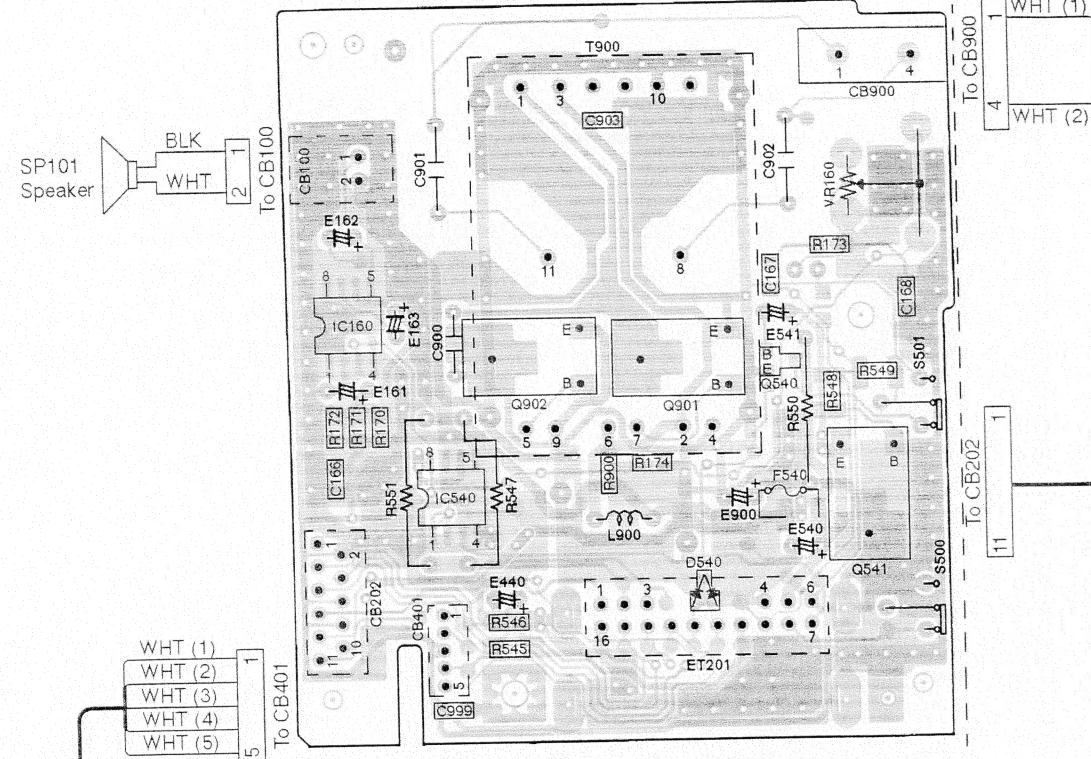
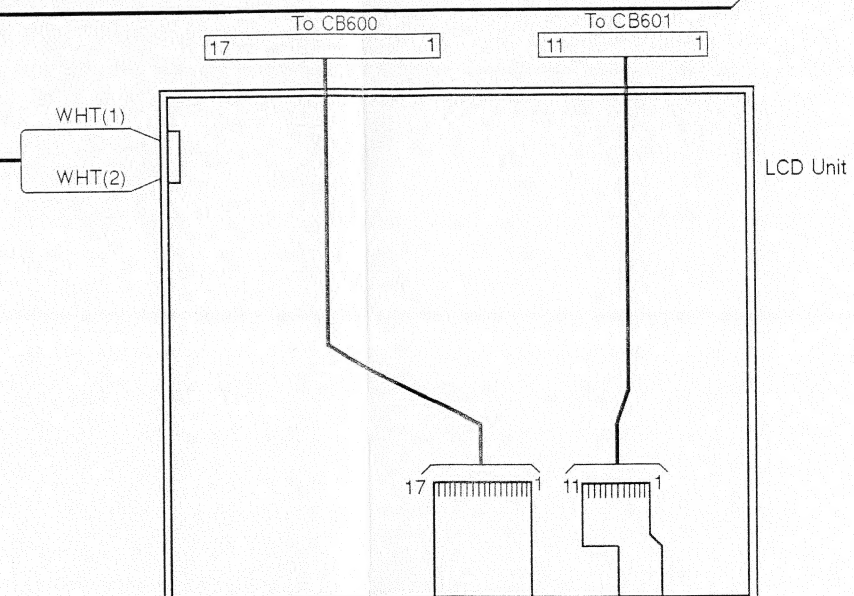
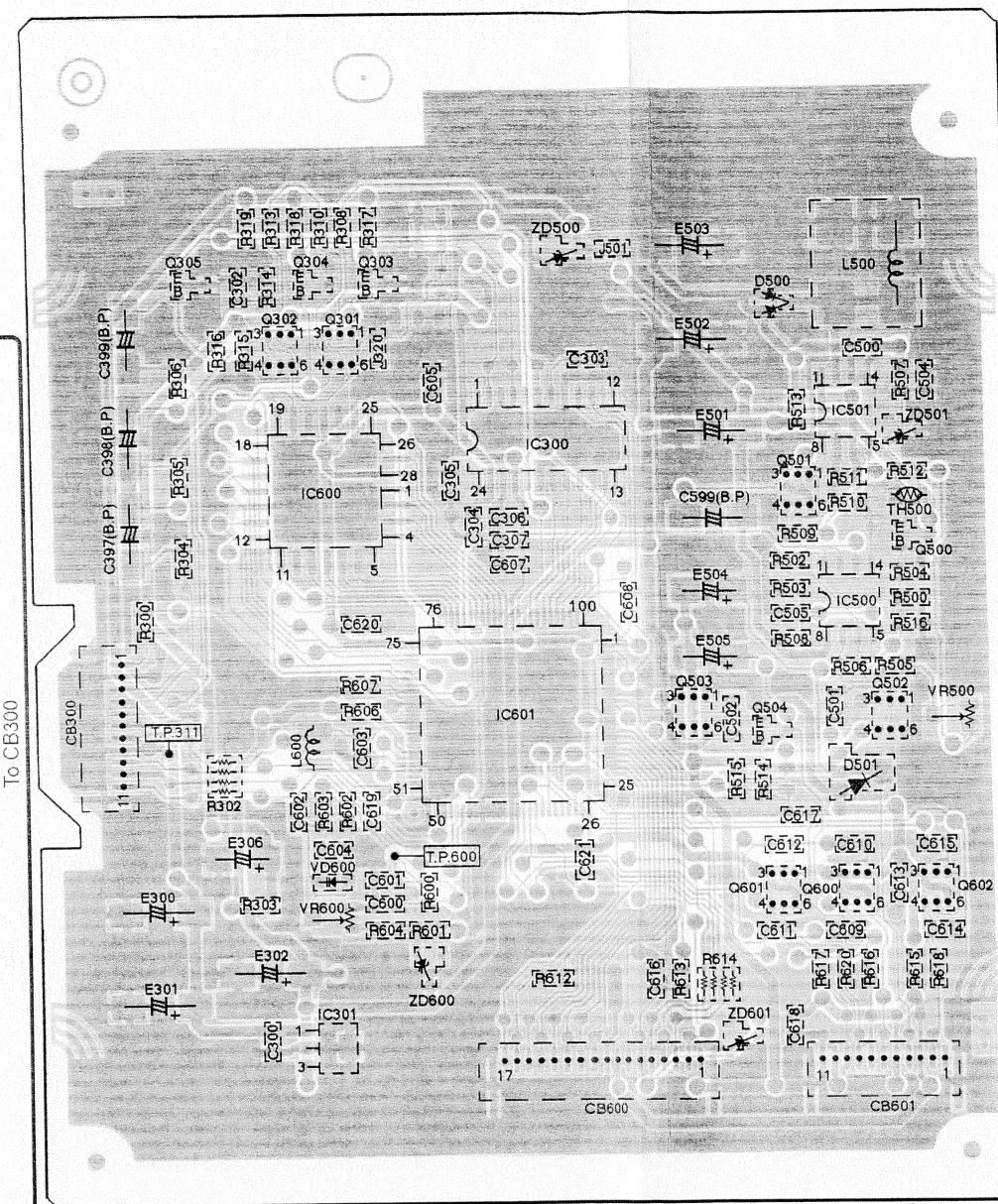


Figure 1 is a schematic diagram of the input section of the 4051A. It shows a 5-to-1 multiplexer with inputs WHT (1) through WHT (5) and a select line CH401. The output is connected to a 4051A multiplexer (LD500) which is also controlled by CH401. The output of the 4051A is connected to an IC405.



Orange Color Pattern :Component Side Pattern  
Blue Color Pattern :Foil Side Pattern

LCD Unit

# Exploded View (Cabinet)

TVE-M006P

## Cabinet Assembly Parts List

NOTE: No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description
1		01E24706S01	Assy., Case Surface
2		15E23426S01	Cover, Glass
3		15E23436S01	Case, Bottom
5		36E23431S01	Lever, Switch
6		03E23434S01	Screw, Flat
8		03E23435S01	Screw, Flat
9		03E23437S01	Screw, Flat
10		03E23438S01	Screw, Flat
11		03E23439S01	Screw, Flat

